APRIL, 1956

Traffic Engineering

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- Camarillo Study
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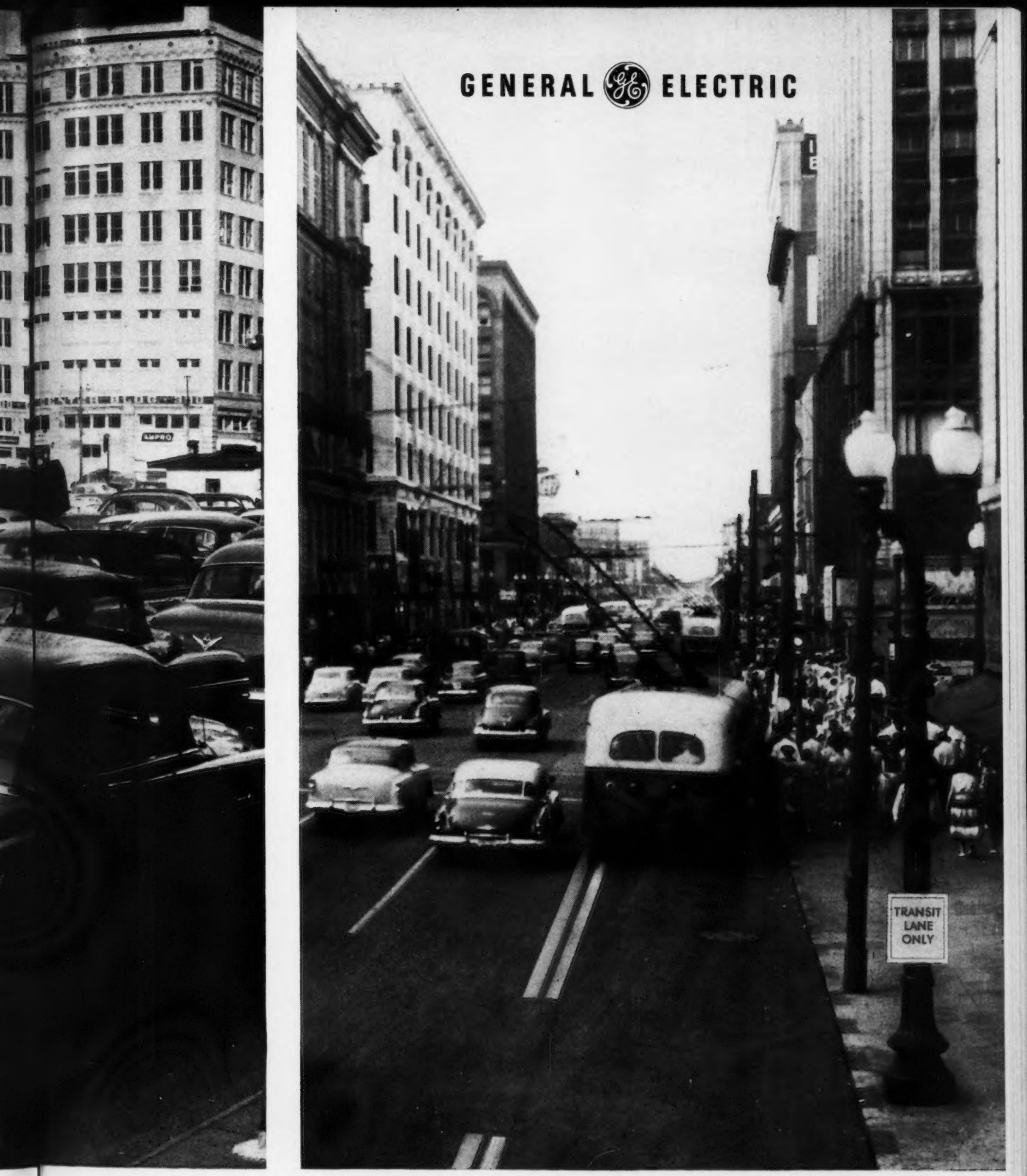

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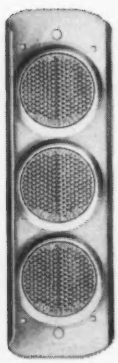

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Traffic Engineering

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COVER: Finding one's auto in this huge parking lot must present a problem to users in Chicago. The parking pattern made by the hundreds of autos is seen from the top of the New Prudential Building in the Windy City. The spacious parking area is in Grant Park. Credit (United Press Photo)

DEFINITION: Traffic Engineering is that phase of engineering which deals with the planning and geometric design of streets, highways, and abutting lands, and with traffic operation thereon, as their use is related to the safe, convenient, and economic transportation of persons and goods.

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2. Recruiting top people through well organized contacts with retail, manufacturing, professional, commercial and labor organizations which include in their membership the presidents and general managers of the organizations represented. The active participation of these top men is essential in order to insure:
   a. That the proposed solution is acceptable to the community.
   b. That the Traffic Engineer can properly influence community policy by presenting his views directly to top people.
   c. That the press will be cooperative.

3. Presenting his analysis of all the pertinent facts in a clear, concise and interesting manner. The essential traffic information, the Traffic Engineer's ingenuity and skill, and the mature judgment of top businessmen is an unbeatable combination.

4. Assuring the elected officials of the community that substantial public support is available from the citizen's organizations and a cooperative press. No elected official can be expected to endorse solutions to traffic problems which affect the habits of many people when the views of these people regarding the solution are unknown.

5. Carefully selecting one specific project at a time and doing something about it. Many otherwise good programs fail because they attempt to work a miracle by solving the entire problem at one time instead of seizing and holding the initiative through the simple process of selecting suitable projects one at a time and carrying them through to a successful conclusion.

Everyone is impressed by results and results tend to induce plans. Every citizen is a potential valuable member of the Traffic Engineer's staff. Properly encouraged and guided these citizens will work with and for the Traffic Engineer.

Karl G. Beam

Director, District V

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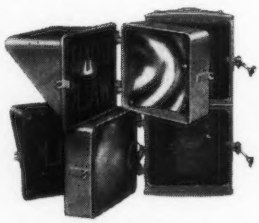

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Camarillo Study

By John F. Kelly

Headquarters Right of Way Agent, California Division of Highways

This paper originally appeared in the September-October 1955 issue of California Highways and Public Works Magazine —EDITOR

ONE AND a half years ago, US Highway 101 through Camarillo served a dual purpose as California's famous coast highway route extending from San Diego to San Francisco and as the main street of Camarillo. In addition to this conflicting mixture of fast moving through highway traffic and local shoppers, there was also the intersection at grade of State Highway Route 153 and a grade crossing of the main line of the Southern Pacific Railroad. The result was a highly dangerous traffic situation for everyone.

On March 24, 1954, this traffic tangle came to an abrupt end. Amid colorful civic ceremonies, Adolfo Camarillo, head of the family for whom the Town of Camarillo was named, cut the ribbon to officially open the new freeway through Camarillo.

This eventful day undoubtedly gave Don Adolfo Camarillo a great deal to think about. He would remember years ago when the town began with a few stores along US Highway 101 near the Southern Pacific Railroad main line crossing. He would be proud of the prosperous community which exists today and the part that he and other civic-minded citizens had played in making this town such a desirable place to live.

Looking to the future on this day, Mr. Camarillo's thoughts were probably the same as all other citizens in the community in that he was certain the new freeway would relieve the hazardous traffic situation; but what would it do to the present economy and future growth of Camarillo?

Questions Involved

Resolving these doubts into specific questions, and then proceeding to obtain answers through the use of factual data was the problem posed for this study. Like many communities faced with the same group of doubts, the basic questions can be summarized as follows:

1. Would the relocation of US Highway 101 to another location decrease the value of property along the old highway route?
2. Would the rerouting of highway traffic to the new freeway put an end to the new commercial building activity in the business district along the old highway?
3. Would the removal of highway traffic from the business district cause business losses which would affect the economy of the entire town?
4. Would the location of the freeway through the center of town divide the community, making the existing business district inaccessible to serve the entire town?
5. Would the freeway be a deterrent to future growth of the community and discourage prospective investors from choosing Camarillo as a location for a new home or business?

It then follows that if these questions can be answered, not by opinion, but by the application of known economic reaction of both land values and business activity to the freeway influence, the people of Camarillo can be certain of their future growth and economy.

Factual Study

One of the first considerations in a study such as this is the determination of the length of time required to obtain a reasonable degree of accuracy. Generally the longest periods of time available for a study will give the highest degree of accuracy. In some communities the adjustment to the freeway mode of transportation is slow. In these cases, studies would not be warranted under two or three years after the freeway is in operation. Despite the fact that a relatively short time has elapsed since the completion of the freeway, ample evidence was found through a preliminary survey to indicate that Camarillo was not undergoing a long transition

SYNOPSIS

CAMARILLO	NEW FREEWAY	ECONOMIC STUDY
Location.....50 miles northwest of Los Angeles on US Highway 101 in Ventura County	Location.....Near center of town	Purpose.....Obtain factual evidence on the economic status of the community affected by freeway
Population.....Estimated 5,000 (unincorporated)	Completed.....March 24, 1954	Factual data.....1. Property values 2. New building construction 3. Retail business condition 4. Community growth factors
Primary income.....Agriculture	Design.....Freeway with cross streets separated from through lanes Four-lane divided expressway permitting grade entrance at westerly end of town	Time of study.....One year before and after freeway opened
Growth influence.....Nearby government installations. Attractive residential sites	Property directly affected.....Business district	

Aerial view showing freeway and old highway through center of Camarillo. Row of palm trees left of freeway indicates central portion of business district along old highway route.

period in adjusting to the removal of through traffic from its business district. With adequate factual data available there was no reason to delay making an economic study just one year after the freeway opened. The Land Economic Section of the California Division of Highways, because of this almost immediate acceptance, proceeded to make a thorough investigation of all phases of the economy of Camarillo. The following material is the result of an analysis of the facts accumulated in this investigation and shows the present economic status of the community one year after the freeway was opened as compared with the previous year when the business district was along the highway route.

PROPERTY VALUES

One positive indicator of the freeway effect upon the economy of the community is the trend in property values, particularly the sale prices of those properties fronting on the superseded highway route. It is not always possible to have this data in an economic study because of an insufficient number of property sales in the community to definitely indicate a price trend before and after the construction of the freeway. Fortunately, there has been sufficient real estate activity along the old highway route in Camarillo so that this study will have the advantage of this vital information.

There are two methods of approach in utilizing the record of land sales. The first requires the use of all property sales and appraising the improvements included in the sale so that they can be subtracted from the entire sale price. The final result is the change in value attributable to the land only. The second method utilizes only the sales of unimproved properties, and thereby eliminates any question as to the amount of change in value to be assigned to the land. This method is obviously preferable and is the one used in this study.

Two fields of investigation were established for comparative purposes: first, the sales of property throughout Camarillo not directly affected by the freeway construction to establish the rate of change that could normally be expected; and secondly, those properties along the old highway where property was directly affected by the rerouting of traffic to the new freeway. All recorded sales or resales from 1946 to mid-1955 were investigated.

Trend on Old Highway

In general, it can be stated that all sales with frontage along the old highway maintained or exceeded the normal percentage of appreciation that could be anticipated, taking into account that the value increase in a growing community for commercial properties generally is at a more rapid rate than other types of land sales.

The accompanying chart shows the average land value of property along the old highway since 1946. The valuation of land at various stages during the development of the new freeway and during the year following its completion are indicated.

The trend in land sales prices from $36 to $110 per front foot, and particularly the increase that has taken place since the route for the freeway was adopted in 1951 would positively indicate that the freeway did not decrease the value of property fronting along the old highway.

Prior to 1945 commercial improvement along US Highway 101 in Camarillo was confined to approximately 25 building sites within a two-block area near the Southern Pacific Railroad crossing. The remainder of highway frontage through Camarillo comprised part of sizable land holdings and was not available for commercial building.

The accompanying diagram of Camarillo shows the location of the retail business district along the old highway.

In 1945 a subdivision with 18 commercial lots fronting on the highway between Glenn and Elm Streets was placed on the market. Two additional subdivisions west of Elm Street were opened in 1947 and 1949, making a combined total of 35 more lots along the highway for commercial improvement.

View of business district along old highway route. Many of the commercial structures visible have been built since freeway route adopted.

UPPER—Before freeway—Traffic on old highway route in business district. Congestion caused by railroad crossing
LOWER—After freeway—Traffic congestion relieved. Old highway route through business district being used for local traffic

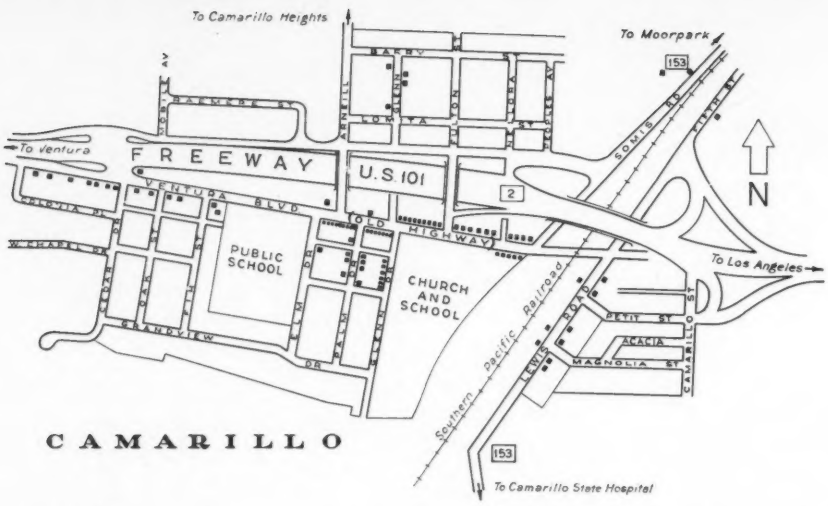

Diagram shows old highway and freeway through central portion of Camarillo. Note railroad and State Highway 153 crossing old highway route. The black squares indicate location of commercial buildings in the community.

On March 24, 1954, when the freeway opened, there were 26 vacant subdivided lots fronting on the old highway zoned for commercial improvement. Fourteen of those lots, with frontage varying from 25 feet to 60 feet, have sold since the day through traffic was diverted from the old highway to the freeway. The sales prices of these 14 lots ranged from $95 to $214 per front foot or an average unit price of $110.

The sale of commercial frontage on side streets perpendicular to the old highway has been small in comparison with sales activity along the highway. The sales prices of these vacant properties have not shown as high a rate of price increase as was found for commercial lots fronting on the old highway after the completion of the freeway.

Taxation

The change in total taxation is a further indication of the increased property valuation and new building construction that has taken place in Camarillo since the freeway route was adopted.

The county taxes levied in Camarillo during the four-year period from 1951 to 1955 have increased from $63,-684.37 to $103,078.08 per year, representing a 61.86 percent change.

The tabulation of county taxes was confined to the central area of Camarillo, as shown on the accompanying diagram. The Camarillo Heights District was excluded because it is not directly affected by the freeway.

NEW BUILDING CONSTRUCTION

The active real estate market along the old highway and particularly the upward trend in sale prices is indicative of the confidence many people have in the superseded highway route as a safe and desirable location to make an investment. This confidence is further emphasized by the fact that the majority of new commercial construction in the community has taken place along the old highway route. Since January, 1951, when it became definitely known that highway traffic would be rerouted to the freeway, 22 of the 29 new commercial structures in Camarillo were built along the route to be superseded.

The accompanying chart shows the number of new commercial structures along the old highway as compared with the number started on all of the streets of the town since January, 1951.

Building activity along the old highway route has not been confined to permits for new structures. Business growth has required expansion of a number of buildings, and permits have been issued for seven additions to existing structures since 1951.

The location of the school and church properties along the old highway route have caused the commercial improvements to be extended for some distance with wide separations between groups of retail outlets. The side streets of the three subdivisions opened in 1945, 1947 and 1949 provide the only opportunity to concentrate any sizable group of retail outlets in one specific area. This has been the principal incentive for building activity in that area. Regardless of the advantage of this centralized location, the commercial building trend and increase in land prices have been more spectacular along the old highway than on the side streets.

The reference to all other streets in Camarillo is not restricted to the three subdivisions. There are several other districts in the community which could have been developed into a new commercial area had there been any fear that frontage on the superseded highway would not remain the most desirable commercial site after the removal of highway traffic.

RETAIL BUSINESS

The factual data used for the retail business section of this study consisted of the gross retail sales reported by each retail outlet in Camarillo to the State Board of Equalization for the purpose of paying state sales tax. This source of information provided a reliable basis for making a comparison of business gains or losses before and after the freeway opened.

To ascertain whether the businesses in Camarillo were in line with the normal trend in business conditions, a comparison was made with all retail outlets in Ventura County during the same period of time.

This study is based upon a comparison of the gross retail sales in Camarillo and Ventura County during one year *before* and *after* March 24, 1954, the date the Camarillo Freeway opened. All of the retail outlets have been segregated into groups in order to distinguish between those businesses in the community most frequently patronized by highway motorists; such as service stations, eating and drinking places, and all other retail outlets which are dependent upon local patronage.

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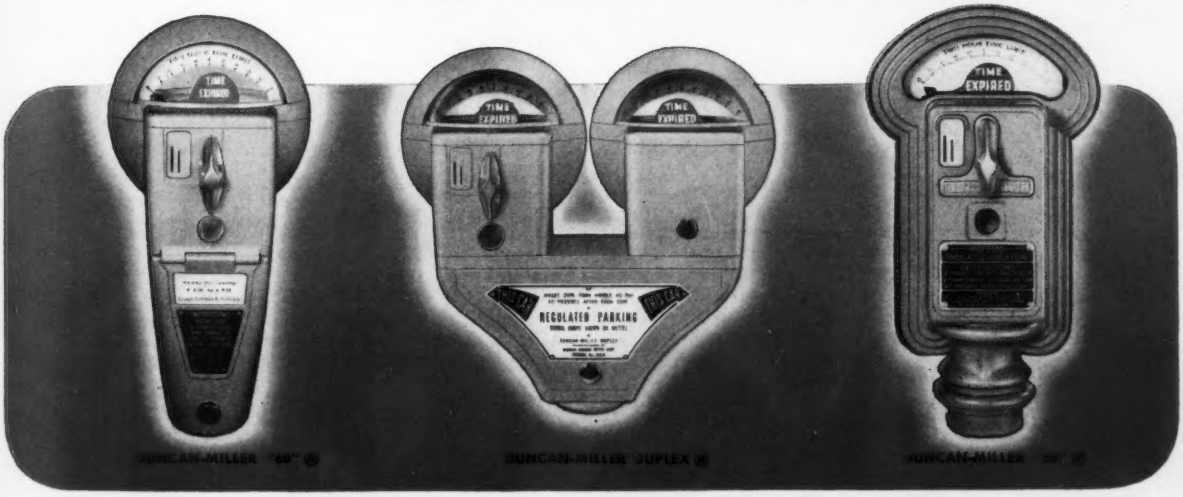

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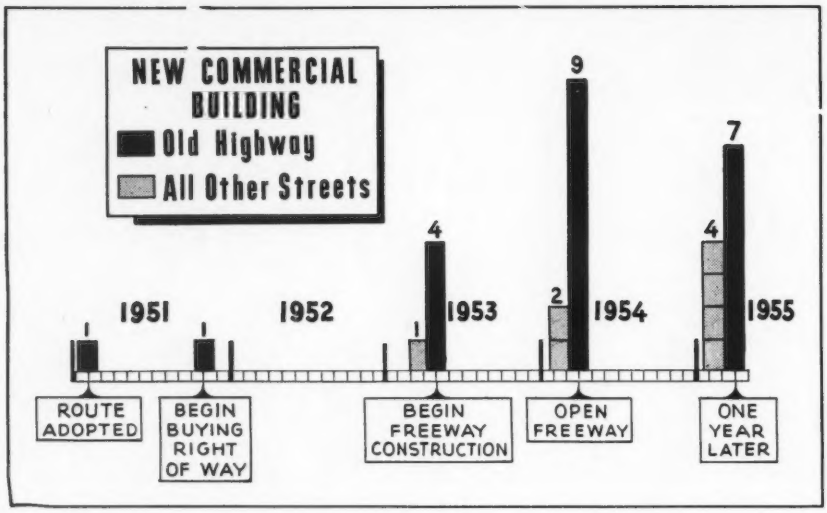


A comparison of commercial building activity along old highway route and all other streets in Camarillo. Twenty-two of twenty-nine new commercial buildings constructed in community since 1951 have been along the old highway.

The graphic illustration in the accompanying chart shows the gains and losses by each group of businesses in Camarillo as compared with Ventura County before and after the completion of the freeway.

The dollars and cents figures in the tabulation of sales tax reports have been converted to percentages so that actual business volume of individual retail outlets would not be exposed.

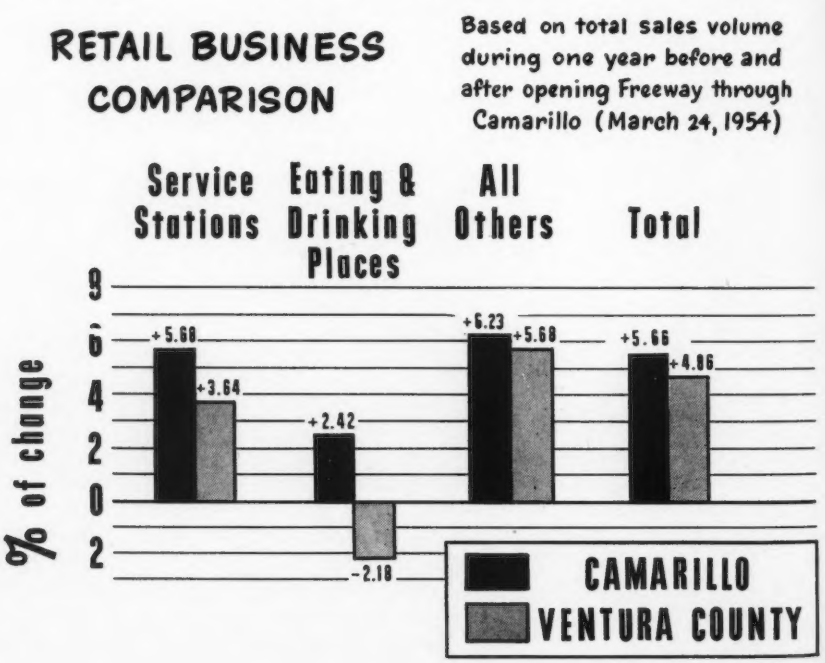
According to the reports submitted to the State Board of Equalization, four new businesses were started in Camarillo during the year before the freeway opened. One of these new businesses was in the group catering to highway motorists; whereas, the other three were in the group unlikely to benefit from highway traffic in the business district.

During the year "after" the records show 10 new businesses started in Camarillo. Five of these were in the category of service stations and eating and drinking places. Their location along the old highway route is an indication the investors did not feel that highway traffic at the front door was a requirement for success.

During the "before" period the records do not show any businesses closing out without a successor; whereas, during the year "after" there were two retail outlets in this category. Both of these businesses would be classified as a type dependent upon local patronage.

The total gross retail sales in Camarillo were 5.66 percent greater during the year after the freeway opened as compared with the year before. Total retail sales throughout Ventura County during this same period increased 4.86 percent. In other words, the economic condition of Camarillo from the standpoint of retail business was slightly higher than the increase required to attain equal status with the normal trend in business conditions in this general area.

The majority of retail outlets in Ventura County were subject to the same general economic influences and therefore had a relatively equal opportunity to succeed during



Graph illustrating percentage increase or decrease in volume of retail sales in Camarillo as compared with Ventura County during a similar period of time.

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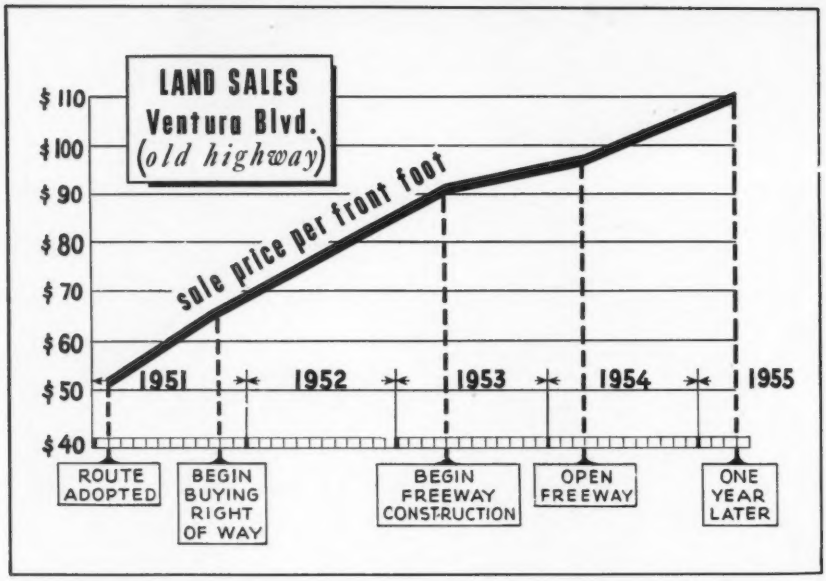

Trend in land prices along old highway route during various stages in the development of the freeway.

the overall two-year time period covered by this study. In Camarillo the rerouting of the highway away from the business district represented a radical change from the traffic pattern to which the community had become accustomed. The merchants in Camarillo were required to adjust to this change in addition to the normal changes affecting business in other communities. Whatever adjustments may have been required to overcome this change were successfully accomplished within one year.

Service Stations

Service stations are one of the groups of businesses most likely to derive some benefit from highway traffic through the business district. The gross sales reports after the rerouting of highway traffic in Camarillo indicate that total service station business in the community was not deriving appreciable benefits from through highway traffic. The increase of 5.68 percent as compared with a 3.64 percent increase shown by all service stations throughout Ventura County reflects a substantial gain after the removal of highway traffic from the business district.

The community increase for service station receipts does not necessarily mean that each service station automatically shared in the community business increase. A tabulation of the gross retail sales of the individual service stations revealed that some of the stations suffered a business decrease during the year "after" while others enjoyed an increase in gross sales. The reason some of the stations suffered losses during a period when total sales in the community were increasing was due to local competition. Within two months after the freeway was completed two new major brand service stations opened on the old highway route in Camarillo. The volume of business they performed reduced the proportionate share of total business in the town for the existing stations.

Three of the existing major brand service stations located near the Southern Pacific Railroad depot in the older portion of the business district along the old highway route acquired new sites near the center of the business area (along the old highway route). Modern service station improvements were constructed on the new sites in order to compete for business increases taking place in the community.

Gasoline Sales

The total number of gallons of gasoline sold by all service stations in Camarillo during the period covered by this study has been obtained from the records of the oil companies and the state Board of Equalization. These figures reveal that after the freeway in Camarillo opened the total number of gallons of gasoline sold increased 4.73 percent over the previous year. This gain follows the state trend of 4.30 percent increase in gallonage sales in 1954-55 as compared with 1953-54.

During the "after" period the two new stations in Camarillo had a similar effect upon gallonage sales as upon the gross retail sales of the individual service stations. Despite the losses in gallonage sales among some of the service stations, the gain in total gallons sold in the community is further evidence that the rerouting of through traffic was not damaging to this type of business.

Eating and Drinking Places

The retail outlets selling food with nonalcoholic drinks, beer and wine, or all types of liquor, comprise the group of businesses referred to as eating and drinking places. Like service stations, these retail outlets are the types of businesses in the community that highway motorists are most likely to patronize.

The factual reports indicate that eating and drinking places in Camarillo were not relying very much on highway traffic for their success. The 2.42 percent *increase* for the year after the freeway opened compared with the 2.18 percent *decrease* for the same type of retail outlets throughout Ventura County shows the benefit of the freeway to this business group.

If the owners of these businesses had elected to cater primarily to the passing motorist rather than building up a good repeat business among local customers, the effect of rerouting highway traffic from the business district to the freeway would have undoubtedly reflected a different trend in gross sales.

Where income is primarily dependent upon the merits of good business management as evidenced by service, quality merchandise, etc., the removal of through traffic and congestion is a district benefit. The gains made by eating and

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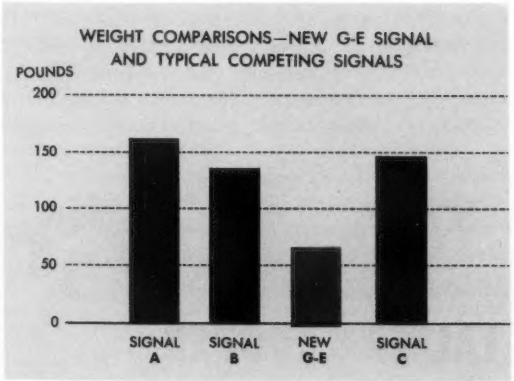

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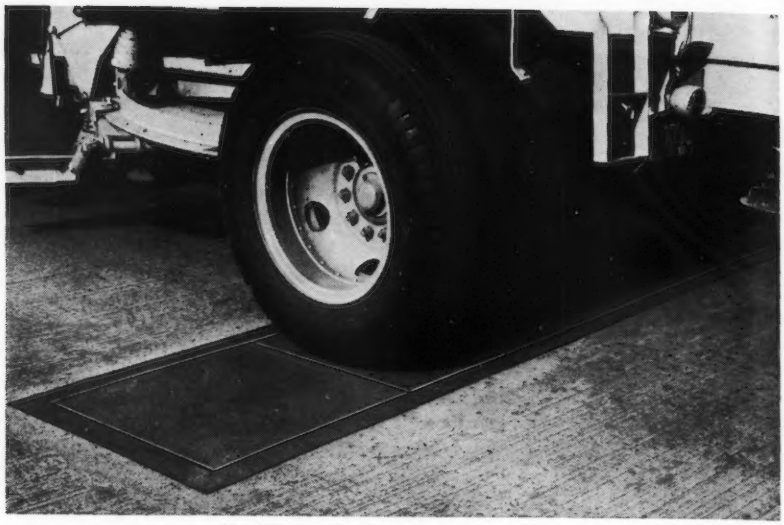

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drinking places during the year after the freeway opened in Camarillo discredits any assumption that the removal of highway traffic from a business district is ruinous to this particular type of business.

All Other Business

The majority of the retail outlets in Camarillo, such as grocery, hardware, clothing stores, etc., comprise the "all other" group. The tabulation of gross retail sales shows a 6.23 percent increase for this group after the freeway opened as compared with the year before. The same type of businesses throughout Ventura County gained 5.68 percent during the same comparative period. The gains made by the "all other" group of businesses in Camarillo were not as spectacular as those made by service stations and eating and drinking places, but were well above the normal expectancy during this period.

TRAFFIC

Before the freeway was completed, a total of 8,250 vehicles per day used the old highway route through the business district of Camarillo. Local traffic comprised only 1,210 of these vehicles.

The removal of approximately 7,050 through highway travelers from the main street of Camarillo made the retail outlets along the highway more desirable to the local shopper because of better parking facilities and safer traffic conditions for motorists and pedestrians.

COMMUNITY GROWTH FACTORS

This study has shown the effect of the new freeway upon the economy of Camarillo through such positive indicators as property values, new building construction and business conditions in the community. The primary purpose of this study has been to determine the freeway effect upon the economy of the community; however, an economic analysis of Camarillo would not be complete without consideration being given to all of the factors influencing its economy.

Government Installations

The geographic, climatic, and physical conditions of the area surrounding Camarillo have made it a popular place for the construction of various government installations. The close proximity of Camarillo to these government facilities with their large pay rolls and job opportunities has had a marked effect upon the growth of the community in recent years.

The oldest and best known of these government installations is the Camarillo State Hospital, located less than five miles from town. This large mental institution opened in 1936 and at the present time has approximately 1,600 employees. Approximately 200 of the employees live in the Camarillo area. The expenditures made in Camarillo from the $5,500,000 annual pay roll, plus the money spent in the community by visitors to the hospital, have a substantial effect upon the economy.

The Oxnard Air Force Base located approximately two miles west of Camarillo is the government installation situated closest to the town. At the present time, there is a total of approximately 1,950 civilian employees and military personnel at this air force base. According to latest reports from the air force base, an additional squadron and other manpower increases are anticipated in the near future. Approximately 316 of the present personnel live off the base and an indefinite number of these people are residing in Camarillo.

The U. S. Naval Air Missile Test Center at Point Mugu near Highway 101 alternate contributes additional pay roll expenditures in the Camarillo area. At the present time, there are an estimated 4,500 military personnel and civilian employees at this installation. An estimated 450 people live in the Camarillo area.

The U. S. Naval Advanced Base depot at Port Hueneme is located approximately 11 miles from Camarillo. An estimated 228 of the 3,800 civilian and military personnel at the depot live in Camarillo.

Attractive Residential Sites

The climatic conditions and country living atmosphere at Camarillo have attracted a number of residents, particularly in the Camarillo Heights area. Camarillo enjoys a convenient location, being situated approximately half way between Los Angeles and Santa Barbara, and a relatively short distance from Oxnard and Ventura. Completion of the freeway through Camarillo links the community by a modern highway system with these urban centers. The reduction in driving time is expected to make Camarillo more popular than ever as a residential community.

At the time this study is being written, a subdivision of 78 homes ranging from $12,000 to $15,000 is planned for construction adjacent to the frontage road south of the freeway and west of the business district. Other plans for residential and commercial building in the community indicate that Camarillo will grow considerably in the near future.

CONCLUSIONS

In summarizing this economic study, these conclusions can be made:

1. The relocation of US Highway 101 to another location did not decrease the value of property along the old highway route. This property frontage increased at a higher rate than similar property elsewhere in the community.
2. The rerouting of highway traffic to the freeway did not put an end to new commercial building along the old highway. New construction on the superseded highway has had all the characteristics of a building boom.
3. The freeway benefited retail business to the extent that every type of business in the community showed a substantial increase after the removal of highway traffic from the business district.
4. The location of the freeway through the center of town did not divide the community or make the existing business district inaccessible to any particular area. The spectacular growth in the existing business district supplies the answer to this question.
5. The freeway has not discouraged new investments in the community. Building activity since the completion of the freeway and proposed construction indicates that Camarillo is just beginning to grow.

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Transit Speed-Up Improvements in Nashville, Tennessee

By William H. Mann (Mem., I.T.E.)
Traffic Engineer, Nashville, Tennessee

TRANSIT IS GENERALLY the unfavored child in any municipality—a Cinderella in more ways than one. Transit has always done the hard work of passenger hauling in our community household. It is high time now that a little magic be applied and this erstwhile scullery maid be glamorized a bit and her good points brought out.

Without transit, and *good* transit, core area business and values must suffer. The old attitude and the usual one, that transit is a necessary evil to move people who can't afford to drive their cars to town is a pernicious and unenlightened one. It is an attitude which is giving place to the enlightened realization that a healthy transit system is part of the fabric of a prosperous community. Instead of standing by indifferently and watching transit companies struggle with upward spiraling congestion and costs and downward spiraling passengers, it is being realized that a little encouragement and a little help is in order from official city sources.

This enlightened view of the place of transit in our city was seen by the current administration and plans were laid for using a block in Memorial Square at the very edge of the core area as a kind of outdoor transfer station. This block is part of a park in front of the State Capitol. Simple but attractive shelters were erected over the sidewalks at five locations at City expense.

Beginning January 1, 1956 buses were rerouted so that all lines touch Memorial Square at one of the five shelters. Coincident with the rerouting, another helpful feature was instituted. The right hand curb lane on each of three one-way streets was designated by signs as being exclusively for buses from Monday through Friday during the rush hours —7-9 A.M. and 4-6 P.M. The pavement was also laned and signed to give this information.

There has been no traffic regulation enacted making the provision enforceable. The signs are educational only. Considerable publicity has been given to the arrangement however, and a high degree of observance by the public has been noted.

Union Street, varying in width from 20 to 25 feet curb to curb, was previously heavily congested by buses and passenger cars. The greatest relief from congestion has been realized on this street. The other two streets are 30 and 32 feet in width curb to curb. Good improvement is noted in these streets also. Parking of cars or standing of trucks is banned on the streets concerned during morning and evening rush hours, 7-9 A.M. and 4-6 P.M.

One change which has contributed to relief and has speeded up schedules on this street was the prohibition of right turns at three intersections during the hours 4 to 6 P.M. Passenger cars attempting to turn right previously were slowed-down or stopped in the path of the buses by conflict with pedestrians. This regulation is effectuated by neon signs, time clock controlled.

Fig. 1.
Union Street and Memorial Square with special bus lanes and bus stop shelters.

Transit company officials report that time of buses in the core area averages about 20 per cent less than it did prior to January 1. This is in spite of some lines having as much as one half mile added to their mileage. On some lines operating on close headways, time saving is sufficient to make possible the removal of one bus from service and still maintain old headways.

The overall improvement in schedules is the product of all three steps taken:

1. Loading at shelters on Memorial Square. This involved removal of some heavy loading stops from narrow, congested streets to the Square where adequate street space is available, thus speeding all traffic. The greater street space on the Square permits loading of each line at a definite point, thereby expediting loading.
2. Exclusive bus lanes during morning and evening rush hours on three of the more congested streets. It has

Fig. 2.
Memorial Square near the state capitol with several bus stop shelters shown.

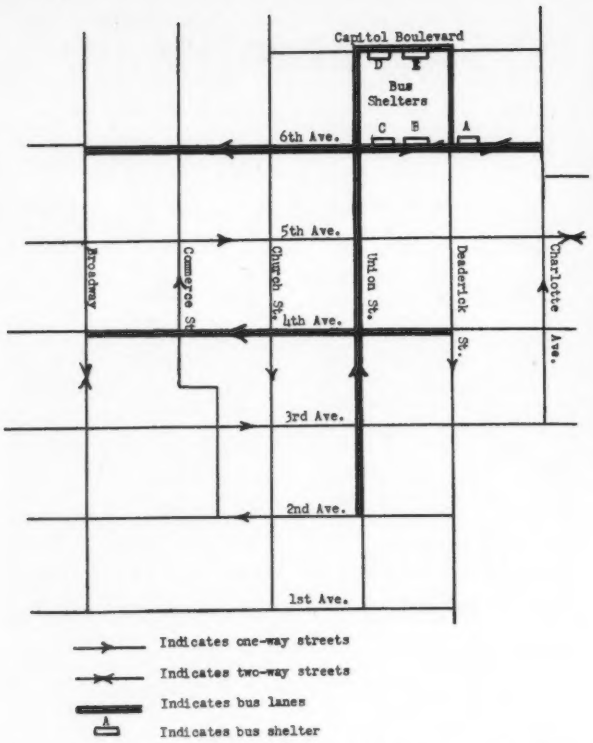

Fig. 3.
Street system in downtown Nashville with location of special bus lanes.

not been thought practicable to set these up in a traffic regulation and enforce them, at least without further conditioning of the public. But wide publicity has resulted in at least an 80% conformance with the idea.

3. Prohibition of some turns during evening rush hours. At three locations with heavy pedestrian movements where turning movements by passenger cars were slowing buses, appreciable speed-up has been realized.

Fig. 4.
Bus lane on Union Street with designated bus lane signs in right foreground.

It is not possible to assess the value of each of these steps separately in terms of time saving. They were all instituted at the same time. Schedule improvement is the result of the total time saved by all three measures together.

In conclusion, transit people and public officials are well pleased with the results. The public has accepted the changes readily though transit route patterns were considerably changed. There have been no complaints received by either Nashville Transit Company or by the City. There hasn't even been a letter-to-the-editor in any of the local papers in protest. Business people have been quiescent.

Judged by lack of any objection, by measurable savings in bus schedules, and by convenience to bus patrons, all concerned with planning these innovations feel that their work has been extremely fruitful. An important round has been won for mass transit through close collaboration by city officials.

Membership Applications

The following applications have been received since the list of applicants published last month.

APPLICATIONS FOR TRANSFER

HALVERSON, James R.
Chief Traffic Engineer
State Road Commission of Utah
525 West 13th South
Salt Lake City, Utah
March 5, 1956 for ASSOCIATE grade

HARTLEY, John E.
City Traffic Engineer
Police Headquarters
Springfield, Illinois
February 28, 1956 for ASSOCIATE grade

KING, Gerhart F.
Civil Engineer III
Illinois Division of Highways
Bureau of Traffic, District 10
160 North La Salle St.
Chicago, Illinois
February 27, 1956 for ASSOCIATE grade

OLMSTEAD, Evan E.
Traffic Engineer
Chicago Transit Authority
Room 7-155 Merchandise Mart Plaza
Chicago 54, Illinois
February 23, 1956 for MEMBER grade

RICE, Paul W.
Director of Traffic Engineering
City Hall
Corpus Christi, Texas
March 6, 1956 for MEMBER grade

SCHWAR, Johannes F.
Roads Engineer
Division of Civil Engineering
Department of Transportation
P. O. Box 415
Pretoria, South Africa
February 27, 1956 for ASSOCIATE grade

WALONS, Richard A.
Traffic Engineer III, Bureau of Street Traffic & Parking
Room 709, City Hall
135 N. La Salle Street
Chicago 2, Illinois
February 24, 1956 for ASSOCIATE grade

WARR, Robert H.
Associate Engineer, Traffic
Seattle Engineering Department
Traffic Engineering Division
401 County-City Building
Seattle 4, Washington
February 23, 1956 for ASSOCIATE grade

NEW MEMBERS

CUPP, Albert E.
Assistant Senior Traffic Engineer
419 City Hall
Dallas, Texas
February 27, 1956 for ASSOCIATE grade

DEARMON, Charles W.
Engineer
609 Municipal Building
101 West Third Street
Dayton 1, Ohio
February 16, 1956 for JUNIOR grade

DIERSTEIN, Philip G.
Assistant City Engineer
City Building
Champaign, Illinois
March 5, 1956 for JUNIOR grade

FLYE, William D.
Design Engineer
Dept. of Public Works
Municipal Building
White Plains, New York
February 28, 1956 for JUNIOR grade

HEYWOOD, H. Milton
Traffic Design Engineer
Dept. of Traffic Engineering
413 St. Paul Place
Baltimore 2, Maryland
February 27, 1956 for JUNIOR grade

KISSELEFF, Louis G.
Traffic Engineering Survey Analyst
Colorado Dept. of Highways
Planning and Research Division
Traffic Operations Section
4201 E. Arkansas Avenue
Denver 22, Colorado
February 28, 1956 for ASSOCIATE grade

PAYNE, Junius H.
Assistant Engineer
Florida State Road Department
Traffic and Planning Division
Tallahassee, Florida
March 2, 1956 for ASSOCIATE grade

PLETNIK, John F.
Traffic Co-ordinator
City Hall
Phelps Street
Youngstown, Ohio
February 22, 1956 for JUNIOR grade

POTENZA, Fred, Jr.
Traffic Engineer
Chicago Motor Club
66 E. South Water Street
Chicago, Illinois
March 2, 1956 for JUNIOR grade

POWARS, Lowell A.
Traffic Engineer
Dade County Commission
Road and Bridge Department
Office of County Engineer
1301 County Court House
Miami, Florida
March 2, 1956 for ASSOCIATE grade

ROGERS, Malcolm H.
Superintendent of Services
Town of Bathurst
Box 60
Bathurst, New Brunswick
February 27, 1956 for ASSOCIATE grade

Detroit's Control of Construction in Street Areas by Utilities

By Stanford P. Gross (Assoc. Mem., I.T.E.)
Senior Assistant Traffic Engineer, Detroit, Michigan

WHAT A BACKUP! Thoughts run through your mind and you visualize a terrible accident causing such congestion. After creeping forward, foot by foot, the cause of your aggravation and wonder is evident. A portion of the roadway travelled by you and thousands of other motorists during the rush hours is closed to traffic because of construction work underway by a public utility or other agency.

To control this street work and provide all possible street capacity during the peak traffic hours this Department, three years ago, requested the Permit Division of the Department of Public Works for their assistance since they actually issue the permits for all street pavement openings. We requested that they forward all permit applications for street openings to this Department for review before issuing final approval. To aid them in their new assignment we prepared a city-wide map indicating what arteries should be reviewed by us before the final permit was issued (see Figure 1).

The Department of Public Works no longer forwards applications to us. At the present time, a representative from each utility company brings the applications directly to our office for approval before visiting the other city departments concerned with utility work. Each utility company also has the map indicating what streets should be reviewed by us. When a request for street opening is received by this Department, we review the entire project and stamp our approval on the application and drawings that usually accompany the job. Another stamp is inked below our approval to indicate what traffic restrictions accompany the construction work.

When reviewing requests for street pavement openings, we consider a variety of factors that ultimately affect the job as well as the traffic flowing by the project. Should rush hour restrictions exist on the street to be excavated, whether morning or afternoon, we indicate on the application and drawings that all street openings be plated during these hours. The conventional method of plating street openings is by the use of steel cover plates varying from 5′ x 6′ x ½″ to 5′ x 15′ x 5/8″ in size. Another cause of congestion is the dirt and debris resulting from the excavation. We specify

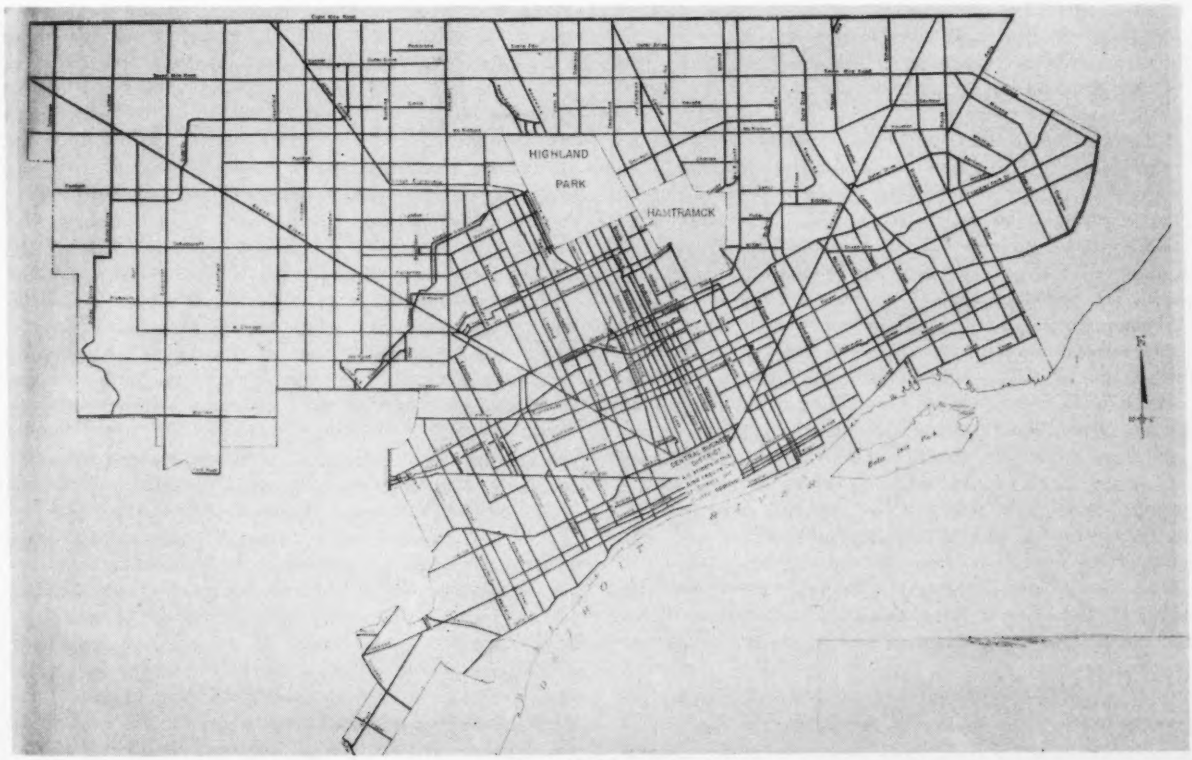

Fig. 1.
The arteries designated by the heavy black lines require departmental approval before any construction work is started.

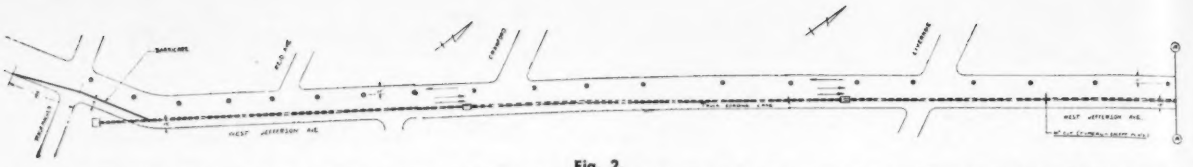

Fig. 2.
This figure illustrates the arrangement of rubber cones and barricades for the 7 A.M. to 9 A.M. peak morning traffic flow. From Rademacher to Dragoon Avenues the centerline of the steam main was located 13 feet from the south curb of Jefferson Avenue. Wood barricades were placed at the west end of the job to channelize vehicles through the construction area. Flares, 20 feet apart, were used during darkness to properly define this barricade. Rubber cones were placed 80 feet apart, 11 feet from the north curb of Jefferson to provide one lane of traffic for the light, westbound movement. Two lanes were provided for the heavy eastbound movement.

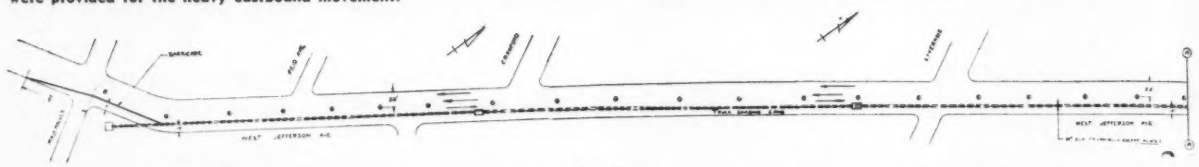

Fig. 3.
This figure indicates the arrangement of rubber cones and barricades required for the 3 P.M. to 5 P.M. afternoon traffic flows. From Dragoon to Rademacher the rubber cones were placed 22 feet from the north curb of West Jefferson to permit two westbound lanes and one eastbound lane. The portion of the pavement between the excavation and the south curb being used for truck loading and unloading.

that all this material, and the equipment used in this operation, be removed from the street during the rush hours. For example, if there is an afternoon restriction, such as "No Standing 4 P.M. to 6 P.M.," all street openings should be plated, and all dirt and equipment be cleared from the street area before the restriction takes effect. A restriction of this nature usually covers the heavy volume portion of the street, while the remaining section of the street can be worked, provided that operations do not force the lighter flow of traffic into the busy portion of the roadway. If this construction work causes vehicles to use the heavily travelled portion of the roadway, we require the company to cease all operations during the rush hour period.

On streets where all day parking is allowed, we permit the utility companies to use the parking lane for the storage of their equipment provided that it is placed at least 50 feet from all "Stop" and other regulatory signs. When the construction work crosses any minor street we specify that local access to and from that particular street be maintained at all hours of the day.

During the off-peak periods of the day, usually from 9 A.M. to 4 P.M., the bulk of the construction work is accomplished with traffic flowing by the job site. Another specification noted on the permit application is that a minimum of one lane of traffic be maintained at all times. This specification is a variable and, of course, depends on the roadway width and prevailing traffic conditions.

Upon many occasions, the proposed construction work is so extensive that all the traffic restrictions cannot be specified on face of the application. When this occurs a letter is written to the specific utility enumerating all the restrictions. Copies of this letter are then sent to the various city departments, i.e., Permit Division, Street Inspection Division, etc. A copy is also forwarded to the police precinct having jurisdiction in the area of the job site. This letter provides the precinct with all the necessary information governing the working conditions of the job and they may exercise all the restrictions should the occasion arise. We are extremely fortunate in having a Police Department that will enforce the restrictions that we impose on any street construction project.

In some cases, however, detours become necessary because of the extensive nature of the construction work. This arises when work on a large water main, sewer, steam main or conduit is necessary. The number of men, amount of equipment and other factors prevent the efficient and safe use of the streets during the construction period. We request the utilities to come into our office at least one month before the start of the work in order that we may become acquainted with the proposed project and determine what should be done traffic-wise. If a detour is required, the necessary steps are taken toward re-routing the traffic. This preview of the job provides us with enough time to accomplish all the detour work before the construction work commences.

Last year one of the utilities constructed a 12-inch steam main under the pavement of West Jefferson Avenue. They used the open cut method of laying pipe because of the unusual working conditions and economics of the job. We allowed them to use this busy artery during all hours of the day because of the unbalanced flow of traffic existing on that street. In the morning rush hour an extremely heavy eastbound movement develops with the westbound flow being very light. In the afternoon peak hour the opposite takes place with the heavy movement westbound and the light flow eastbound. By a simple arrangement of rubber cones and the use of steel cover plates, the work continued under the heaviest peak conditions without any apparent slowdown of traffic or stoppage of work (See Figures 2 and 3).

Getting private and governmental utilities to appreciate our position was not always easy. Their chief concern was that of completing the job as quickly as possible. On the other hand, however, we have the responsibility for the safe and expeditious movement of traffic. Reconciling these two views took both patience and salesmanship since even city departments often viewed traffic as a secondary consideration. Currently, we obtain general agreement without too much difficulty.

Another interesting facet in our attempt to keep traffic congestion to a minimum is our work with automobile wash racks and drive-in banks. The automobile washing business has rapidly evolved into a thriving, money-making enterprise. Along with this increase in business is the increased use of city streets by motorists awaiting their turn to enter the building for a car wash. This flagrant use of streets for this purpose has caused congestion, confusion, and a general disruption in the smooth flow of traffic on our main arteries. This condition is irritating during the off-peak hours, and extremely aggravating during the height of the rush hours.

To control this practice, we requested the Department of Buildings and Safety, about four years ago, to send us all

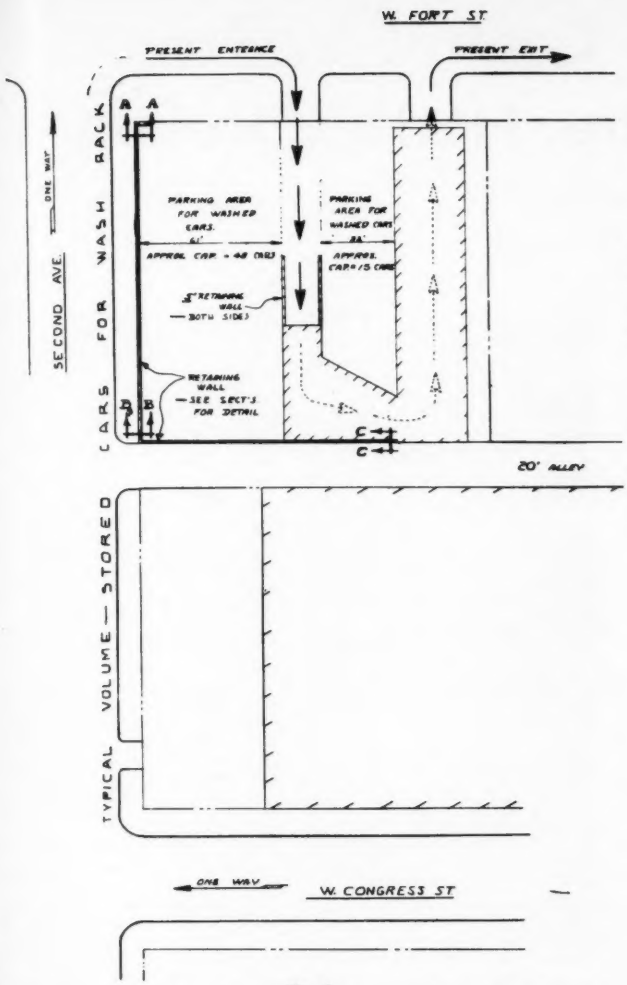

Fig. 4.
Existing operational methods caused 25 percent loss of capacity on Second Avenue and resulted in severe congestion and extended back-ups.

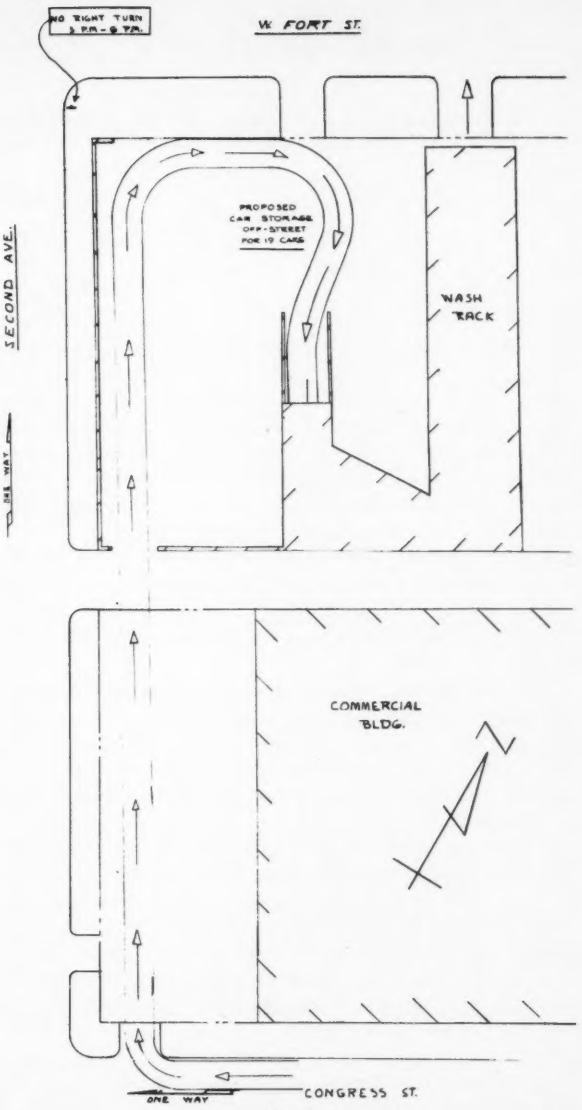

Fig. 5.
Proposed operational changes, ultimately adopted, completely cleared Second Avenue of car storage problem. Cars now store off-street, instead of on Second Avenue, as shown in diagram.

proposed wash rack plans for approval before issuance of building permits. This procedure provided us with an opportunity to discuss the wash rack operation with the owner and to suggest changes to help the traffic situation in the immediate vicinity of his proposed business. In many cases these suggestions resulted in a more efficient operation of the wash rack itself. Upon reviewing the car wash plans, we send a letter to the Department of Buildings and Safety and a copy to the owner indicating our approval. We approve wash rack construction with the provisions that cars do not line up on adjacent streets; that no direct entry be made into the building from the street, and that precautions be taken to prevent the formation of ice on the sidewalks and streets from water drippage as cars exit the wash rack.

One wash rack within the Central Business District had been a hindrance to traffic movement for a considerable length of time. The existing methods of operation employed by this establishment seriously hampered the flow of traffic on Second Avenue. This important artery, one way northbound, accomodates approximately 700 cars per lane per hour during the afternoon rush hours extending from 3 P.M. to 6 P.M. This capacity on Second Avenue, a 4-lane roadway, was cut by 25 per cent when motorists used the east curb lane for car wash storage. This loss of capacity seriously affected the flow of traffic and caused extensive back-ups. To alleviate this condition, turn prohibitions were installed at the intersection of Fort and Second Avenues; and an alternate plan was developed to satisfactorily handle the car storage problem by utilizing off-street facilities available to the wash rack. This remedial measure provided full capacity to Second Avenue and augmented the flow of traffic during the peak hours (See Figures No. 4 and 5).

The drive-in bank, an innovation in banking procedure, has provided a convenience for much of the motoring public. This convenience, although an excellent aid to banking, has caused serious traffic congestion and hazards by having the motorists store on main streets while awaiting their turn to bank at the window. In most instances, we have managed to control these drive-in banking establishments. This was accomplished by requesting the Department of Buildings and Safety, before they issued the building permit, to submit for

(Continued on page 306)

Direct Time Cycle Control by Traffic Density in Charlotte, North Carolina

By H. J. Hoose (Mem., I.T.E.)
Traffic Engineer, Charlotte, North Carolina

Few problems are more vexing to the traffic engineer than that of controlling traffic which varies in volume and speed throughout the day. Where these conditions are predictable, systems using time clocks and program drums usually are adequate to relieve peak and off-peak congestion. If average conditions are distorted by high or low extremes, however, or if traffic patterns very during the same period from day to day, preset cycle changing may not be effective. Such was the case in Charlotte, N. C. which five years ago installed a variable time-cycle control system for its central business district. Here is that city's experience with the problem and how it was overcome—a report of vital interest to every traffic engineer on a new traffic density detection and control system.

Shortly after we installed a variable time-cycle control system in downtown Charlotte some five years ago, we realized that our traffic problem still was very much with us. Specifically, we discovered that time cycle control by time clock and program drum was not sufficiently responsive to our ever-changing traffic volumes. As a result, congestion would build up prior to peak hours, with movement limited to 8 mph-10 mph throughout the business district.

But recently we installed a direct traffic-actuated system which permits instantaneous time cycle response to varying traffic volumes—and thus have relieved our problem to a large measure. Basically, this is accomplished by a series of detectors carefully located throughout the signalized area to transmit current traffic volume information to a Crouse-Hinds Traffic Density Master Controller. All information continuously is weighed by the controller, and where necessary, an immediate change made in the time cycle to relieve congestion.

This has brought added flexibility to our Trafflex system. The accumulation of vehicles prior to peak periods largely has been eliminated. We also have noted a marked improvement in the handling of traffic accumulating at intersections due to turning movements from minor streets to main streets. In short, we have found that direct time cycle control by traffic density permits our system to operate at full efficiency.

Before making a change, however, we undertook a thorough study of street capacity to determine the ability of our roadways to accomodate traffic. As suspected, this revealed that demand far exceeded street capacity during peak hours. It was then that we also discovered the problem resulting from a gradual build up of traffic prior to reaching the A.M. and P.M. peak. This meant that the predetermined time cycle set at the master controller often was not in step with actual traffic conditions and time allotted for green signals was not adequate to produce the intended movement.

After the surveys were completed, adjustments were made to the master controller in an attempt to relieve peak and off-peak congestion. But the limited flexibility of programmed cycle length permits this type system to operate at full efficiency only when volumes do not vary significantly from day to day, or when average conditions for peak periods are not influenced by extremes. Since neither condition was apparent in our downtown traffic pattern, we finally decided that cycle control directly actuated by traffic density was required.

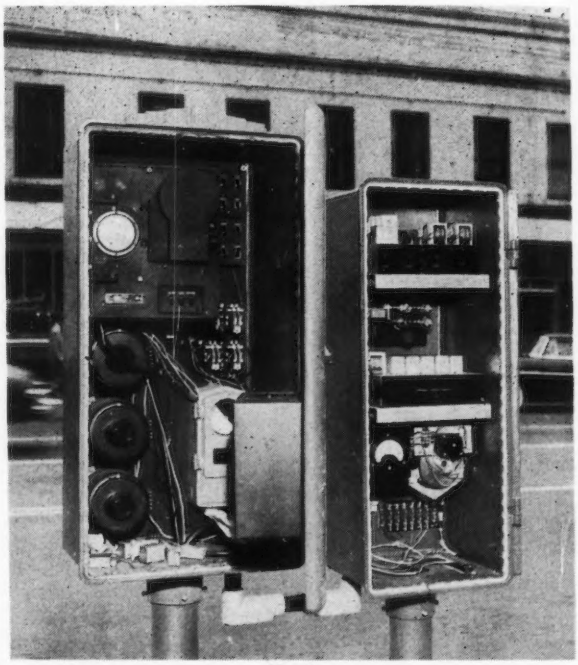

Fig. 1.
Charlotte's New Traffic Density Master Controller. This device was added to the existing system to work in conjunction with the Trafflex master controller.

Graphical Comparison

The extent to which the Traffic Density Master Controller relieves this problem is illustrated in the accompanying chart covering a typical 12-hour period. This shows the relationships between traffic volume (left ordinate), cycle length (right ordinate), and time of day (abscissa). The solid horizontal line represents time clock control; Traffic Density Master Control is indicated by the dotted line; vehicle volume by 15-minute intervals is marked by the top line.

During the period from 7:30 A.M. to 8:30 A.M., vehicle volume varied from 220 to 430. Throughout this period, the cycle length was set at 60 seconds by the time clock. At 9:30 A.M., a 55-second cycle went into effect which paralleled vehicle volume until noon. Between noon and 1:30 P.M., however, volume alternately increased and decreased by as many as 120 vehicles—yet the cycle length determined by the time clock remained fixed at 55 seconds.

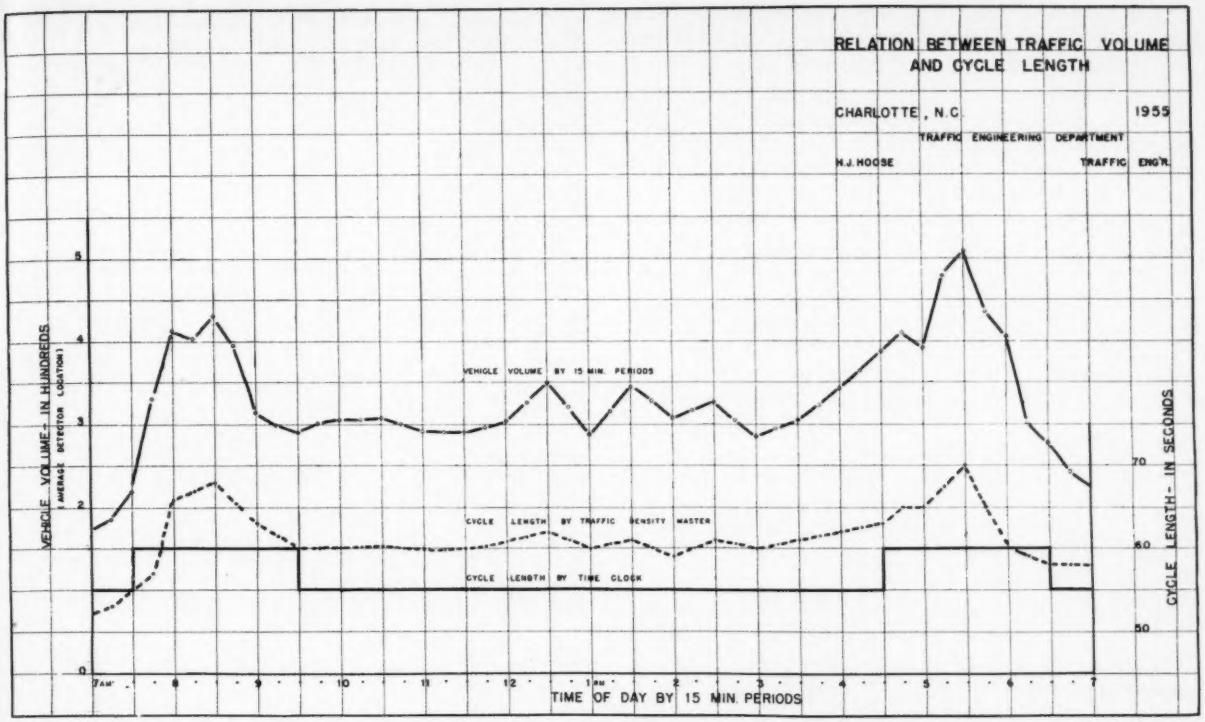
RELATION BETWEEN TRAFFIC VOLUME AND CYCLE LENGTH
CHARLOTTE, N.C.
1955
TRAFFIC ENGINEERING DEPARTMENT
H.J. HOOSE
TRAFFIC ENG'R.
VEHICLE VOLUME - IN HUNDREDS (AVERAGE DETECTOR LOCATION)
VEHICLE VOLUME BY 15 MIN. PERIODS
CYCLE LENGTH BY TRAFFIC DENSITY MASTER
CYCLE LENGTH BY TIME CLOCK
CYCLE LENGTH - IN SECONDS
TIME OF DAY BY 15 MIN. PERIODS

Fig. 2.
Chart showing the relation between traffic volumes and cycle length. The old method by changing the cycle length by time clock versus cycle length changed by density master controller are also compared.

Particularly indicative of our problem was the period from 3:00 P.M. to 4:30 P.M. when volume gradually increased from 285 to 385. From 4:30 P.M. to 6:30 P.M., the 60-second cycle again went into effect, with volume varying from a high of 510 vehicles at 5:30 P.M. to a low of 275 vehicles an hour later. At best, time clock control was limited in its effectiveness under these fast-changing conditions.

By contrast, the Traffic Density Master Controller is able to vary the length of the cycle to meet current needs. During the day the cycle varies from 52 seconds at 7:00 A.M. to 70 seconds at 5:50 P.M. Rapidly occurring changes, such as from noon to 1:00 P.M. similarly are reflected by a change in cycle length. Also, the gradual change in volume from 3:00 P.M. to 4:30 P.M. is paralleled by an increase in cycle length from 60 seconds to 63 seconds. Traffic Density Master Controller variations were computed at 15-minute intervals, the same as traffic volumes.

How System Operates

To achieve this control, vehicle detectors either of the magnetic or pressure-sensitive type are placed at strategic points throughout the signalized area. As many as ten detectors may be used to transmit traffic flow information to the master controller.

The master controller, equipped with an automatic cycle regulator, checks secondary controllers during each time cycle. If traffic volume has increased, the system cycle will increase proportionately; if traffic volume has decreased, the system cycle will be shortened. The correct time relationship is established within one time cycle.

Any time cycle between the limits of 40 and 120 seconds may be selected. Minimum and maximum values are set by calibrated dials, and once established, changes in traffic density will cause the time cycle to vary between these limits. Adjustments within one second are possible, and the regulator can cover the entire cycle range within ten minutes. With our system, the Traffic Density Master Controller is a companion unit to the Crouse-Hinds Trafflex Master, which still operates and selects dials by time of day.

The regulator also is equipped with hand-operated switches for transferring operation of the system from one dial to another, from one reset to another, or to remote signal features.

System Controls

Several controls are provided to permit the Traffic Density Master Controller to operate at full efficiency. These include:

Individual Detector Weighing Control—Each detector is equipped with an independent control which can be adjusted to allow for unusual conditions that might effect overall efficiency of the system. We have discovered through experimentation that all individual detector settings should be the same when detectors are oriented correctly in sections where traffic is free-flowing and traffic volumes are approximately equal.

Master Weighing Control—This control governs the overall effect of the detector system. When the setting is increased, the detector impulses exert a stronger influence on the cycle length. A decrease in the setting lessens the effect of the impulses.

Unregistered Density Control—It provides an adjustment which cancels the effect of a predetermined amount of traffic. Traffic density must exceed this limit before the time cycle increases.

Manual Control of Time Cycle—The master controller also is equipped with a switch for changing from automatic to manual control of the time cycle. By means of the manual

selector switch, it is possible to select any one of four preset time cycles to operate the system. Separate calibrated dials are used to set the four preset time cycles. Each dial is adjustable between the limits of 40 and 120 seconds. Any of these four cycles can be automatically selected by the program drum in the event it is preferred over the Traffic Density Master Controller. The preset cycles also can be used to control traffic while the Traffic Density Master Controller is being tested or adjusted.

Minimum Cycle Setting—It governs the shortest cycle length which can be chosen by the Traffic Density Master. This setting is important in preventing the cycle from becoming too short in the early morning hours when traffic is light.

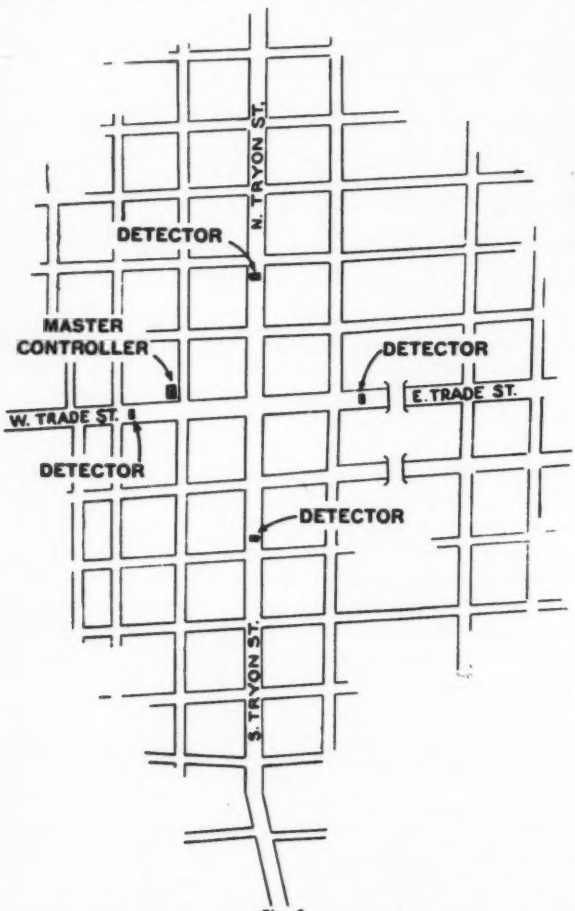

Fig. 3.
Central business district showing location of detectors.

Fig. 4.
Traffic density is measured by vehicle detectors set up at strategic points throughout signalized area. By means of detector-amplifiers as many as ten detectors may be used to transmit traffic flow information to the master controller.

Cycle splits and pedestrian walking time across streets also influence this setting.

Maximum Cycle Setting—This control limits the longest cycle length which can be selected by the Traffic Density Master. Adjustable in one-second steps up to 120 seconds.

Cycle Indicator—Shows at a glance the cycle length currently being used.

Automatic Reset Selector—This optional control is used to transfer secondary controllers from one reset to another in response to a change in time cycle. Adjustments are provided for setting a minimum time cycle at which transfer from reset one to reset two, or from reset two to reset three, will occur. Additional adjustments permit maximum time cycle to be set to transfer from reset three to reset two, and from reset two to reset one.

Program Cylinder—Another optional feature for programming dial transfer, reset transfer, selection of four preset time cycles, and off-duty features. The program cylinder will provide up to ten operations per day, and 70 operations per week. It is controlled by a separate time switch which allows on or off intervals in minimum steps of 15 minutes over a 24-hour period.

DETROIT'S CONTROL OF CONSTRUCTION IN STREET AREAS BY UTILITIES

(Continued from page 303)

our approval all proposed bank plans calling for a drive-in section. A letter was then forwarded to each banking firm informing them of the problems created by the installation of such a unit. We requested them to send us preliminary plans of their proposed buildings in order that we might make any alterations to expedite the traffic patterns adjacent to the bank. In the majority of cases the cars store off-street on the property immediately adjacent to the bank. There is, however, a location or two where physical conditions preclude off-street storage. In these instances, the banks have provided police supervision to prevent undue traffic congestion during the height of the peak traffic and banking hours.

This Department, like others throughout the country, is a traffic control organization concerned primarily with the safe and efficient movement of traffic on our city streets. We designate what control measures should be installed and it is not within our jurisdiction to enforce these restrictions. What traffic specifications we call for concerning construction work in the street are useless unless we have an agency to enforce what is designated.. Our efforts in controlling the use of streets during various construction phases have been successful only through the excellent cooperation of our Police Department. Without their assistance, what we've hoped to accomplish would have been in vain.

A CENTERING THAT DOES NOT BLOCK THE TRAFFIC

By Eusebio Cruciani
Consulting Engineer, Rome, Italy

Fig. 1.
Several boards are clamped together to form a single curved beam. If the boards are not placed together in such a manner that their ends overlap, the length of the compound beam can be increased indefinitely. When a single bundle of boards is not sufficient, two or more, suitably placed, can be used.

Our photographs illustrate a new Italian method of building centering for bridges, overhead passages, and other similar structures that may become necessary to erect across an existing road.

Sometimes, it is absolutely necessary to carry out such work without interrupting the traffic and this is not an easy matter.

Mr. Cruciani has, however, solved this problem in a brilliant manner. Not only his centering requires much less timber than other systems but the timber he uses can be utilized again, practically entirely, for other structures. The principle on which his invention is based is very simple. We all know that a long board can be easily bent to form a curve or an arch. Of course, the moment we let it go it will return to almost exactly its original straight form. Now, if we take two or more boards and bend them all together they will form a stronger arch. If we glue them together or nail them together, they will constitute a practically solid curved beam. Glueing or nailing them together would, however, prevent us from using them for another job. Instead of fastening them with nails, Mr. Cruciani clamps them together at several points. His clamps are quite simple as they consist of lengths of channel girders fastened together by means of screw shackles, but they hold a bundle of boards together in such an efficient manner that it is easier to snap the whole thing into two than to make one of the boards shift its position a fraction of an inch.

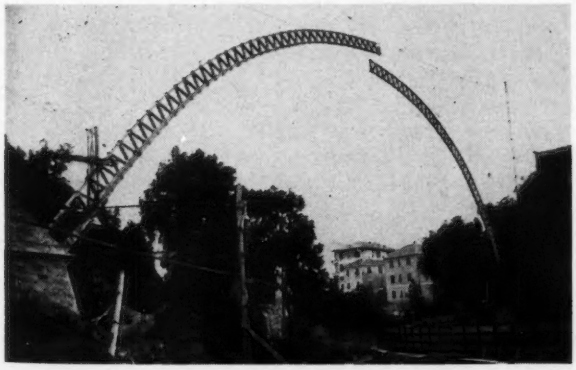

Fig. 2.
An illustration of the manner in which two halves of a center are lifted up.

When the span required exceeds a certain length, it is no longer practical to make a single thick bundle of boards and the inventor takes recourse to twin bundles which are spaced correctly by means of carefully cut struts.

One of the great advantages of Mr. Cruciani's centres is the fact that they are assembled on the ground where the supervising technicians can verify their curvature at frequent intervals.

The centres are built either whole or in halves, according to their size or conditions in which the work has to be carried out. Once up, a third bundle of boards can be added to them. If built in halves, each half is lifted up separately until their ends meet; then some agile workman climbs up and fastens them together.

Fig. 3.
When all the centers are up, planing is nailed across their tops.

When all the centres are up it is an easy matter to nail planking across their tops and to prepare the boxes that will receive the liquid concrete.

In spite of its flimsy appearance, Mr. Cruciani's centering does not sag under the weight of concrete more than an inch or two. A spectacular example of this important feature was supplied by the recently built bridge at Varazze the 100-metre span of which subsided only 61 mm. i.e. less than 2½ inches.

The new centering requires about 75% less timber than the ordinary types and, what is more, practically the whole of that timber can be used again for other jobs.

From the point of view of traffic, the important fact is that the centering can be assembled by the side of the road and hoisting it up into position requires such a short time that it can be done at night when the traffic is light.

TRAFFIC OPERATIONS DURING BALTIMORE'S TRANSIT STRIKE

By Charles M. Upham, Jr. (Mem., I.T.E.), Deputy Director of Traffic, Baltimore, Maryland

On January 29, 1956 the City of Baltimore, Maryland was confronted with a complete central district transit strike. The following article describes in considerable detail the operation of the Traffic Engineering Department during this crisis.

The City of Baltimore was forewarned of the strike approximately three months. During the course of that time, our preparations for the strike included surveys of the downtown area in order to locate curb areas where we could permit parking which was otherwise normally prohibited. We were able to provide about 5600 on-street (curb) parking spaces by doing this.

A quantity of waterproof cardboard was obtained, and sign screens, and three separate types of signs ran off. Their messages were "Parking Permitted During Emergency," "No Stopping or Standing 7-10 A.M.," "No Stopping or Standing 4-6 P.M." These signs covered all the locations where we were to permit parking.

Word was received on Sunday afternoon, January 29, about 2 o'clock, that the strike was definitely on and the walkout would occur at midnight that night. Previously a call schedule was organized whereby we would notify the key men of our sign shop and they in turn would notify their crews. Since it was raining very hard that Sunday, we did not call the crews in immediately but requested that they report for work Sunday night at 7 P.M. At that time we put them on the streets to erect 1200 of these previously described signs. We finished this job about midnight, just as the strike went into effect.

Prior to the strike, Henry A. Barnes and Commissioner James M. Hepbron, of the Baltimore Police Department, issued a joint statement stating that parking would be permitted in certain areas downtown and that the public should be guided by signs. It also stated that the police would exercise all emergency powers and would tow away cars that were parked so as to obstruct traffic, even though they were not in a regular "tow away" zone, and further, that even though the Baltimore Transit Company was on strike and would not be using their bus stops, there would be no parking permitted in bus stops and the "No Parking—Bus Stop" would not be covered. The reason for not permitting parking in bus stops was to leave curb space open so that trucks could load and unload without double-parking. This was necessary because our "No Parking At Any Time" ordinance permits trucks to stop in a "no parking" area long enough to load and unload. When we permitted parking in these "no parking" areas, that made it necessary for the trucks to double-park to load and unload or not to load and unload at all. Since loading and unloading of trucks is essential to the operation of a downtown area, we felt that by leaving the bus stops open this would provide adequate loading and unloading facilities. I might say that while this arrangement has not been perfect, complaints have been at a minimum and I feel that for an emergency everything is working nicely.

On Monday morning, January 30, all of our radio cars were in areas of the city which had been previously assigned, and at 5:30 A.M., I reported to our radio headquarters in order to monitor situations as reported by our mobile observers. I might mention that the observers had previously been assigned locations where we felt we would have congestion and bottle-necking and transportation troubles.

The first day everything was chaos. The morning peak started approximately thirty minutes early by 6:30 A.M., and lasted about a half an hour late to about 9:30 A.M. The downtown area was extremely crowded during the first day. The afternoon rush started about 3:30 P.M. and extended through till about 7 o'clock in the evening.

The main obstruction to the afternoon rush was illegally parked cars in violation of No Parking signs, and it was necessary for the police to do quite a bit of towing. We had a number of cars during the day parked in the bus stops, and these complaints were handed to the police, who issued tickets to such an extent that it fell off rather rapidly from that time on.

During both of these rush periods our mobile observers, stationed in radio cars throughout the city, were continuously commenting on the state of traffic in their areas, and any complaints such as changing signal timing, requesting police assistance at intersections, or requesting police tow trucks, was immediately relayed by a direct line from our radio to the Police Department radio. Changes in signal timing, of course, was handled by our technicians, while the Police work was handled by the Police Department.

The second morning started very much the same as the first insofar as reporting traffic was concerned, but it was noted that conditions were greatly improved. There was some doubling up in vehicles noticed, and the rush did not start until around 7 o'clock and dropped off immediately at 9 A.M., which would signify that most people arrived at the downtown destinations without a great deal of delay.

It was noted in the downtown area that the parking in the bus stops had dropped off considerably, due to the continuing publicity given, and complaints from trucking companies and delivery personnel dropped off. During the day, driving conditions in the downtown area were about normal. The evening rush started at the regular time, approximately 3:45 P.M., and extended until about 6:30 P.M. There was a great deal less illegal parking than the previous day and there was not nearly so many calls for police tow trucks. The natural result was better traffic flow.

During these first two days of operation we verified that actuated traffic signals very adequately handled the increased traffic load and the variation in timing. The fixed-time signals continued to give us trouble, as they could not adapt themselves to conditions, and it was necessary for us to dispatch our personnel to these locations in order to change the signal split to accommodate the traffic or to operate the signals by hand.

After the first two days of the strike operations of the number of cruising observers was reduced to fifty percent and assigned to alternate days, which meant that on any given day one person would work from six in the morning until about 6:30 at night, while on the next day that person would only work from 8:30 in the morning to 4:30 in the afternoon.

The third day of the strike, both morning and evening peaks, had returned to about normal, insofar as the time was concerned. Of course, the volumes were high. Illegal parking, due to the wonderful cooperation of the Police Department, had very nearly disappeared. This left arteries

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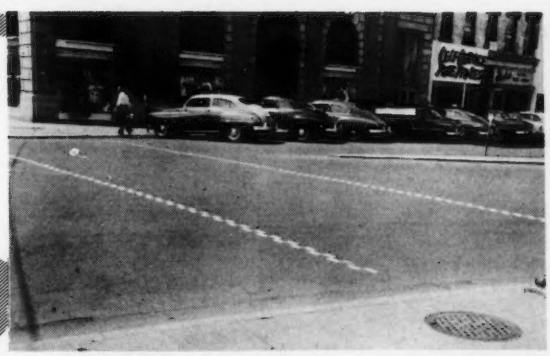

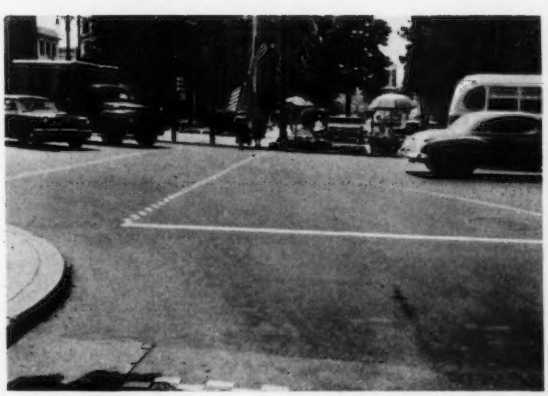

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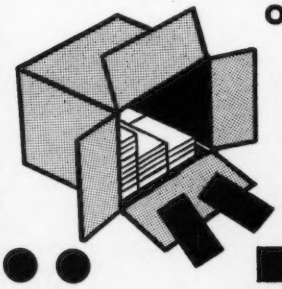

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This traffic tally board was designed by the traffic engineers of a large eastern city, and produced by them for their own use.* 3 Vary-Tallies on each side of the board count and classify all traffic entering intersections from any direction. Positive action of the large finger-keys makes it easy for operator to keep up with heaviest traffic flow.

Veeder-Root makes the Vary-Tally in any combination up to 6 banks high and 12 units wide . . . also in single units. All counters in one bank are reset by one turn of one knob. See how Vary-Tallies can help in *your* traffic-control problems. *Write.*

VEEDER-ROOT also makes Hand Tallies (single) and counters for Parking Meters, Metering Devices, Wheeled Measuring Devices.

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open as we had planned and there was little more than normal time taken for anyone to get to or from work.

At the same time we put our strike plan into effect, the Baltimore Police Department put into effect their "Snow Plan," which meant that the officers coming off one shift overlapped those coming on a shift by about two hours and handled intersections which were not normally handled by police. In most instances this worked out very well. The only difficulties encountered were in a few isolated spots where officers had not received adequate instruction in the handling of traffic.

I feel that one of the lifesavers insofar as we are concerned, is our radio system. Through this we were able to learn immediately of any unusual congestion and dispatch assistance to that location. We were on top of the problem and working on it before it had a chance to become well established. I would go so far as to say that without the radio system we would have been practically helpless.

At the present time there is not much indication of the strike being settled in the immediate future. We feel that we have the strike plan of this department operating in a routine manner and will continue to operate it until such time as the strike is settled.

STOP!

LOOK!

HEED!

The Institute Headquarters office will be moved to Washington, D.C. on or about June 1. We will need your help in remembering to send all information, requests and material to the new offices to be located at 2029 K Street, N.W. after May 31.

Our aim is to please YOU. Help us in this objective. Keep June 1 in mind. If YOU do this you will alleviate considerably what well might result in utter confusion in the Headquarters office —and the New Haven Post Office. And, we do want to hear from you — in Washington!

TRAFFIC NEWS

The Newark Union Motor Truck Terminal, largest of its kind in the world, is located between the New Jersey Turnpike and U.S. Route One near Ruppert Stadium in the Ironbound District of the City of Newark.

Largest Truck Terminal Opened

The Port of New York Authority and seven over-the-road truck carriers who will operate the Newark Union Motor Truck Terminal entered into a four-and-one-half-year lease covering the operational areas at the Terminal. The Terminal, the largest in the world, was opened on March 1. Its use as a public terminal for less-than-truckload merchandise freight was deferred during a period of government occupancy.

The Terminal is located adjacent to U. S. Route 1, a short distance from the New Jersey Turnpike near Ruppert Stadium in the Ironbound District of Newark.

The Newark Terminal was completed by the Port Authority in July, 1950 and was occupied by the United States Air Force until June 30, 1955 for the processing of defense materials.

Rental for the Garden State space in the Terminal will be at the rate of $200,000 a year for four years of the lease term, and at the rate of $120,000 a year for the first six months of the agreement.

The space leased to the Garden State Truck Terminal Corporation comprises the great central platform for handling over-the-road merchandise freight moving in and out of Northern New Jersey. The platform is about 1,000 feet long and 100 feet wide, and accommodates 160 truck berthing spaces. It includes 21,000 square feet of office and gallery space as well as a five-acre parking area.

In addition to the space leased to the corporation, the Terminal provides some 35,000 square feet of office space and 10,000 square feet of concession space to accomodate facilities incidental to the operation of the Terminal.

The Terminal equipment includes a ten-ton crane and an under-floor 1,830-foot-long conveyor system with a capacity of 114 carts. The platform equipment also includes five 1½-ton scales and one ten-ton scale. A pneumatic tube system is available for internal transmission of shipping documents.

A maintenance service and fuel station 100 feet long and 60 feet wide, capable of handling maintenance work on eight trucks simultaneously is also located on the Terminal site which comprises twenty-nine acres.

It is expected that the Terminal will serve a total of twelve carriers, including five sub-tenants of the Garden State Truck Terminal Corporation. They will serve forty states either directly or by means of connecting carriers. It is expected that complete coverage of the entire country ultimately will be reached.

As soon as the Air Force vacated the Terminal, the Port Authority proceeded to negotiate a lease with private operators under which the Terminal could be put to commercial public use. The Terminal operator, through a subsidiary, the Terminal Cartage Corporation, will therefore offer consolidated pick-up and delivery service in a substantial area of Northern New Jersey. The precise area will depend upon the volume of freight to be handled and the equipment available. Initially, it will cover an area reaching twenty miles north, twenty miles south, and eight miles west of the City of Newark. It is expected that this area will rapidly be expanded to the ultimate goal of the eight counties of Essex, Hudson, Union, Morris, Somerset, Passaic, Sussex and Middlesex.

The pick-up and delivery trucks will be equipped with two-way radios for the transmission of messages between the vehicles and the Terminal to assure quick service. The radio control will commence as soon as a frequency band has been assigned by Federal authorities.

State Legislatures Consider Control of Highway Access

Increasing interest in adequate road programs is being shown this year by the consideration of legislation to control highway access or amend existing laws in *six* states, a survey by the National Highway Users Conference reveals. This is the so-called "off-year" for state legislation since only 17 states are scheduled to meet in regular or budget sessions.

The ALABAMA legislature, meeting in fourth special session, has approved a bill (H.148-XXXX) similar to the Bureau of Public Roads model controlled-access highway law. Commercial en-

terprises would be prohibited on any property designated or acquired for controlled-access facilities, but establishment of service roads to facilitate competitive enterprises on private property would be authorized.

An ARIZONA bill (S.6) would provide for construction or establishment of controlled-access highways with provisions similar to the model law, while another bill (S.53) would permit only the State to establish such highways. The latter bill would require the express approval of the people of any city, town or unorganized community before a state or Federally designated highway could be relocated.

The SOUTH CAROLINA legislature has approved a bill (S.250) similar to the model law, but goes further to require a permit from the State Highway Department before any entrance to or exit from any state primary highway (not designated as a controlled-access facility) may be established. Reasonable frontage or access roads are required to be provided when direct entrances or exits are denied.

An amendatory bill in GEORGIA (H.258, passed one House) would authorize the governing authorities of any municipality through which a controlled-access highway passes to regulate and control the erection of any advertising device within 500 feet of the nearest edge of the pavement.

In MASSACHUSETTS, a bill (H. 934) would prohibit any additional commercial enterprises on controlled-access highway property. Existing service facilities on the right-of-way would be permitted to continue operation, and construction of service roads would be authorized to permit establishment of commercial enterprises on private property. Another bill (H.738) authorizes an investigation of the effect of controlled-access highways upon local zoning and planning.

NEW YORK bills (H.983 and S. 343) would authorize service roads between controlled-access highways and other adjacent or intersecting roads along which are located private commercial facilities but would prohibit such facilities on the right-of-way.

The RHODE ISLAND Governor has asked for a "Highway Access Control Commission" to "work out reasonable roadside protective regulations pertaining to ingress and egress on state highways."

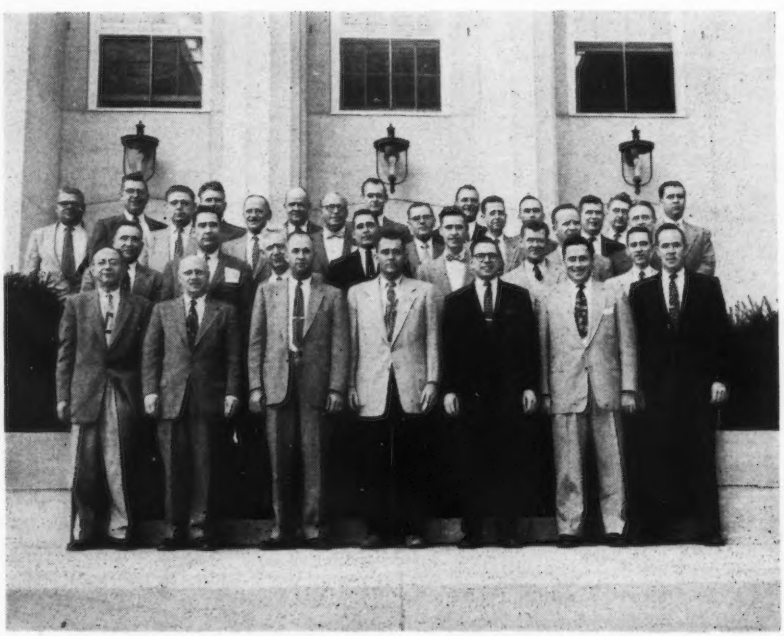
Regional Advanced Highway Training Program

The College of Engineering of the University of Maryland sponsored a regional advanced highway training program during the two-week period February 6-17, 1956. Thirty highway engineers from Bureau of Public Roads, Delaware, District of Columbia, Maryland, Virginia and West Virginia attended this two-week program.

Thirty-two traffic and highway engineering specialists participated in the program by giving lectures on such subjects as "The Road User and Motor Vehicle"; "Traffic Volumes, Accidents and Speed"; "Roadway and Intersection Capacity"; "Highway Signs, Marking and Lighting"; "Sufficiency Ratings"; "Access Control"; "Education and Public Relations"; "Traffic Planning and Administration" and "Parking and Terminal Facilities."

Dr. J. B. Blackburn, Associate Professor of Civil Engineering at the University of Maryland, was the program coordinator.

Of the thirty-two guest lecturers, 17 are members of the Institute of Traffic Engineers. These seventeen are: Henry A. Barnes, Wallace L. Braun, Douglas S. Brinkley, J. P. Buckley, J. C. Bullock, Jr., E. F. Cleary, Burton W. Marsh, Adolf D. May, Jr., William J. Miller, Jr., O. K. Normann, Charles W. Prisk, Charles H. Rex, James B. Rudden, Wilbur S. Smith, A. Vick, III, Alan M. Voorhees, and D. K. Witheford.



Highway engineers who attended the Regional Advanced Highway Training Program held February 6-17 at the University of Maryland.

Left to right: 1st row—Nathan Lieder, G. C. Davis, Wm. B. Shelton, P. C. Staubus, F. E. Tracy, J. L. Ayres, F. L. Isbell; 2nd row—R. W. L. Doering, J. B. Blackburn, (Program Coordinator), J. L. Gregson, Jr., J. E. Sevy, Karl Noerr, S. A. Cunningham, L. F. Conner; 3rd row—H. B. Beard, Jr., E. W. Bunting, (Lecturer), R. W. Wallace, J. W. Gibbons, (Lecturer), E. R. Mayes, D. H. Sides, G. D. Gronberg; 4th row—J. L. Thomas, H. G. Downs, Wm. T. Sprague, Geo. N. Lewis, (Lecturer), R. H. Sheets, J. I. Ellis, J. W. Burdell, Jr., J. J. Leegan, J. A. Stackley, F. J. Lyons.

Those attending the two-week program who are not included in the photograph are: H. L. Hill, F. H. Menke, L. A. Rivard, and W. A. Smith.

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Revised and Expanded Second Edition—1950

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President's Traffic Committee Schedules Region Conferences

Responding to a request by President Eisenhower for more citizen support in the national effort to reduce highway accidents, the President's Committee for Traffic Safety has scheduled four regional conferences to stimulate organization of community safety agencies, it was announced today by Harlow H. Curtice, chairman of the Committee and president of General Motors.

These meetings will bring together representatives of agriculture, business, labor, media of public information, organizations, public officials and women's groups for discussion of the objectives, organization, and operations of civic safety agencies and encouragement of concerted action in their home States and communities.

President Eisenhower, in calling on Mr. Curtice and the members of his Committee to undertake this assignment, said:

"If we are to reduce traffic fatalities in the months and years ahead, we must move forward more rapidly in applying the traffic safety measures set forth in the Action Program. Organized public support for these proved techniques was recognized by the 1954 White House Conference on Highway Safety as the primary essential to application by the States and communities. I am convinced that the Conference recommendation for the organizing of public support groups must be fully applied by all States, counties and cities."

In announcing the regional meetings Mr. Curtice said, "The President's appeal deserves a prompt and wholehearted response from all Americans. Although encouraging progress has been made in reducing the accident rate in terms of total vehicle mileage, the toll of deaths, injuries, and damage continues to be intolerably high. We sincerely hope that the forthcoming conferences will give strong impetus to the mobilization of greater public support for the measures that are obviously needed.

"The effectiveness of well-run civic safety organizations in helping public officials reduce accidents has been impressively demonstrated in many localities. Substantial further progress on a nationwide basis largely awaits the creation of such agencies in the many States and communities which unfortunately still lack them. Participation in this endeavor offers individual citizens and community groups a tangible and constructive means of doing something about the accident problem."

Mr. Curtice said that according to a recent survey less than half of the 242 cities in the United States with more than 50,000 population have citizens traffic safety organizations. Although there are no national figures for smaller communities, he added, the number with accident prevention agencies, based on spot checks, is believed to be proportionately lower.

Schedule of the regional conferences is as follows:

Eastern region, May 1 and 2, Atlantic City, N. J. (States represented will be Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island and Vermont.)

Southern region, May 14 and 15, Miami Beach, Fla. (States represented will be Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.)

Mid-Western region, May 23 and 24, Chicago, Ill. (States represented will be Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.)

Western region, May 31 and June 1, San Francisco, Calif. (States represented will be Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming.)

Governors of each of the States have been asked by President Eisenhower to name delegates from among public officials and citizens. Representatives of leading national organizations concerned with traffic safety will serve as technical consultants at the various sessions.

Members of the President's Committee are: Chairman Curtice; William Randolph Hearst, Jr., President, Hearst Consolidated Publications; Arthur B. Langlie, Governor of Washington; Raymond F. Leheney, Secretary-Treasurer, Union Label & Service Trades Department, AFL-CIO; Charles F. McCahill, Senior Vice-President, Cleveland News and Plain Dealer; T. S. Petersen, President, Standard Oil Company of California; Mrs. Raymond Sayre, Past President, Associated Countrywomen of the World; Charles B. Shuman, President, American Farm Bureau Federation; Robert R. Snodgrass, President, Atlas Auto Finance Company.

Congressional Traffic Safety Study Proposed

A resolution for appointment of a committee of five members of the U.S. House of Representatives to study the problem of traffic safety and make recommendations has been introduced in the House by Representative Samuel N. Friedel of Baltimore.

Representative Friedel said today that he offered the resolution in response to growing demands for creation of a post of national traffic safety director with Cabinet rank. One of his functions would be to standardize regulations.

Mr. Friedel said, however, that in his resolution he was careful to provide for protection of State's rights.

Part of the inspiration came from Charles Adler, Jr., (Affil. ITE) Baltimore inventor and member of the State Aviation Commission, who originated many traffic signals and controls, including some of the earliest.

Mr. Adler sent the White House a telegram last fall, urging creation of a new Cabinet post of Secretary of Traffic. Since then substantially the same suggestion has been made from other quarters.

The Baltimore inventor and other advocates of a national traffic czar said the problem of traffic safety has become too vast to be solved on local levels, with limited authority.

Representative Friedel said that "solution of the problem might lie in the creation of an agency rather than a Cabinet or sub-Cabinet post but, under the circumstances, immediate action must be taken."

"We cannot wait" he went on. There must be some central authority to coordinate the work of the State and volunteer agencies. Precedent is not wanting. There are many parallels in government."

Baltimore News-Post
January 7, 1956

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New Appointments . . .

Burns Joins Consultant Firm

Pointing up the emphasis on safer highways is the recent appointment of Harry F. Burns (Assoc. Mem. ITE) former Winnipeg city traffic engineer, with one of Canada's leading engineering organizations. He will head the traffic section of the municipal department of A. D. Margison and Associates Limited of Toronto. This firm is now engaged on a number of large projects and is working jointly with a United States firm on the design of the Metropolitan Toronto Expressway.

Harry F. Burns

A graduate of the University of Manitoba, where he won the coveted McKechnie Memorial Scholarship, Mr. Burns was born in Winnipeg in 1917. He entered the Winnipeg city engineering department in 1950 and two years later was appointed city traffic engineer. His ability in this specialized field of engineering was recognized last year when he was elected president of the Canadian Section of the Institute of Traffic Engineers. He is also a member of the Engineering Institute of Canada and of the Association of Professional Engineers of Manitoba.

In the war, Mr. Burns served with the Royal Canadian Navy on North Atlantic corvette convoy patrol. He married the former Eunice M. Thompson in 1942, and they have three young sons. He is an enthusiastic curler and last year was a member of the semi-final rink in the Consols of the Manitoba bonspiel.

Mr. Burns brings to his new post a wealth of knowledge on complex traffic engineering problems and, will be in a position to give valuable advice to highway and municipal authorities throughout Canada.

Poeter Named State Highway Commissioner

The Vermont Highway Board has announced that William Poeter of Goshen, Vermont, will succeed Paul H. Gates as state highway commissioner. The appointment was approved by Governor Joseph B. Johnson.

William Poeter

Commissioner Gates, who was appointed in 1951, is leaving to resume active management of his telephone and electric power companies at Franklin, Vermont. Gates is the son of the late Governor Charles W. Gates who also was Vermont's first highway commissioner.

The new commissioner, William Poeter is a native of New Jersey who purchased a home in Vermont three years ago. He has had considerable management and construction experience with P. Ballantine & Sons of New Jersey and the M. W. Kellogg Construction Co. of New York. His duties have taken him as far away as Iran and South Africa.

Poeter studied engineering at the Brooklyn Polytechnic Institute. He commenced work with P. Ballantine & Sons in 1933. During World War II he was in the design department of the M. W. Kellogg Construction Co. in New York, California and Abadan, Iran. After the war he returned to Ballantine as a design project engineer.

Later Poeter went to work as area engineer for an oil refinery at Ponca City, Oklahoma, and after another period with Ballantine, went to the Union of South Africa for the M. W. Kellogg Company. Mr. and Mrs. Poeter came to Vermont in 1953 where he organized a plumbing, air conditioning and heating concern at Brandon.

Commissioner Gates' term expired February 1 but he is remaining until April 1 when the new commissioner will take office. The Vermont state highway department is administered by a three-man board. Hubert E. Sargent of Barre is the department's chief engineer.

Dingman Becomes Sales Manager

Michael Dingman, formerly sales representative for Pfaff & Kendall, has been appointed sales manager for Micro Balancing, Inc., Garden City Park, New York.

Mr. Dingman will handle sales and promotion of the company's Lumatrol line of photo-electric street light controls.

Michael Dingman

The appointment was announced by Dave Francis, Executive Vice-President of the firm.

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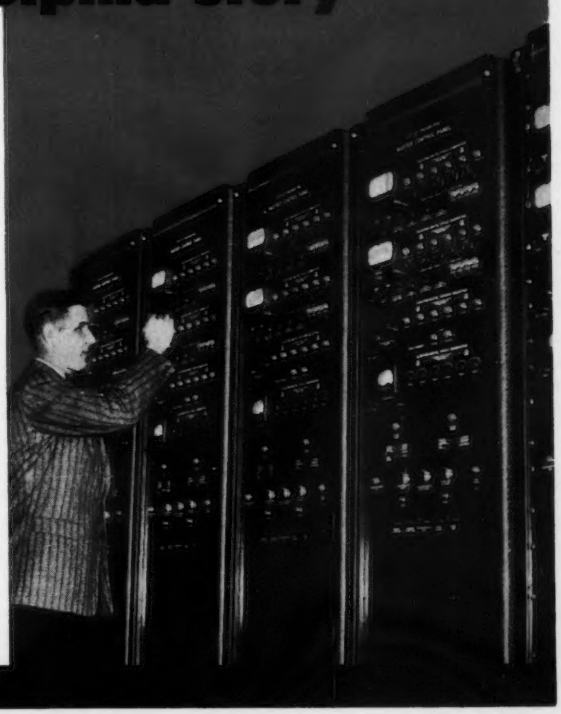

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INSTITUTE AFFAIRS

David Baldwin Named Executive Secretary

The Institute is pleased to announce the employment of David M. Baldwin as Executive Secretary, replacing M. M. Todd, whose resignation to enter the offices of Wilbur Smith and Associates

David M. Baldwin

became effective on March 31. Mr. Baldwin comes to the Institute from his position as Director of the Traffic Operations Division of the National Safety Council, where he has served for the past 14 years. His varied and responsible experience with the Council included service as Secretary of the Traffic and Transportation Conference, probably the most potent of all agencies working for useful coordination of traffic and safety efforts.

Prior to his Council assignments, Mr. Baldwin held positions as Safety Engineer for the Virginia Department of Motor Vehicles and State Police for 5 years, and as City Traffic Engineer in Evanston, Illinois, for 3 years. He graduated with honors from the University of Illinois, receiving his B.S. in civil engineering there in 1933, and his M.S. at the same University in 1934.

This valuable background, distinguished by competent performance of difficult tasks, and his admirable personal qualities seem certain to enrich the Institute's official life and its service to members. Mr. Baldwin reports for temporary duty on April 16 in New Haven, where the headquarters office is now located. His first major job will be to engineer the move of the Institute's offices on or about June 1 to their first permanent headquarters in the new NSPE Building, 2029 K Street, N. W., Washington 5, D.C.

SECRETARY'S COLUMN

This first column by your new Executive Secretary is being written in Chicago without the benefit of discussion with the headquarters staff or access to the files. It represents a point of view which may well be modified after more contact with specific problems of the job, but it does give me an opportunity to talk to the membership of the Institute at the very start.

First, I want to express my appreciation to my predecessor, Tim Todd, for his personal help and guidance in my efforts to get oriented in the new job. Without him and his staff in New Haven I would have much less knowledge than I do about the task ahead.

A principal objective is certainly a smooth-running central office, handling business matters and correspondence promptly and providing good service to members. Hand in hand with the development of an efficient central office procedure is the production of a well-balanced, interesting, attractive and worthwhile magazine. Not only does this provide the most important single means of communication in the traffic engineering field but it also represents the most important single item of income for the Institute.

Complicating these two tasks at the outset is the problem of moving the office and physical facilities from New Haven to Washington as quickly and with as little interruption to normal business as possible. I hope this can be accomplished some time during May or June.

Finally, there is the major task of developing and strengthening local sections and making sure that the Institute is properly recognized and carries the weight it should in local and national traffic affairs. That means travel for the Executive Secretary, visiting the sections, appearing at and taking part in traffic and safety meetings of national importance, and otherwise generating recognition for the organization, its objectives and its membership. This will not be done overnight, and in fact many of the outside contacts must wait upon the development of a good inside operation in the headquarters office.

One major area in which the members can help now is through the development of sound technical articles for TRAFFIC ENGINEERING. The magazine needs a solid core of good technical articles, which must in most cases come from the membership of the Institute. The Associate Editors can and do help —but the burden falls principally on the individual members.

So, if you feel a good article in your bones, put it on paper. If you want us to help edit it, say so but give us the article anyway. Second best, if you know of a new idea or an interesting project which would make a good story, tell us and let us find someone to write about it. I don't think I need to tell you that one of the best ways of building recognition for the profession and for the Institute is through the creation of a magazine which is widely read and respected by technicians and others. It can't be done, however, without help from the membership of the Institute.

I'm looking forward to the new work with much interest. The Institute is entering its most useful period, in all probability, and I believe that together we can make the organization a real force in this country. Your advice, your criticisms, and your help will be much appreciated.

DAVID M. BALDWIN
Executive Secretary

LOOKING AHEAD

APRIL 24-26 — DETROIT, MICHIGAN
Annual Michigan Safety Conference, Sheraton-Cadillac Hotel.

APRIL 30-MAY 2 — WASHINGTON, D. C.
Annual Meeting Chamber of Commerce of the United States.

MAY 8-9 — CORVALLIS, OREGON
Ninth Annual Northwest Traffic Engineering Conference, Oregon State College.

MAY 17-18—COLUMBIA, MISSOURI
Eighth Annual Traffic Engineering Conference, University of Missouri.

SEPT. 17-20 — ST. LOUIS, MISSOURI
Annual Meeting, American Transit Association, Jefferson Hotel.

SEPT. 17-20 — DENVER, COLORADO
61st Annual Convention of the International Municipal Signal Association, Cosmopolitan Hotel.

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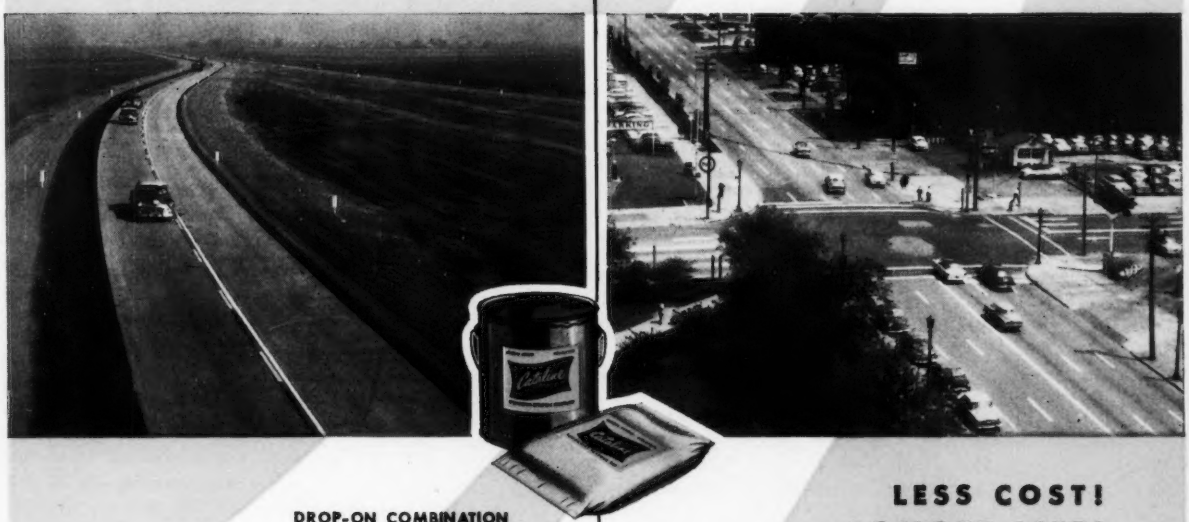

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American Transit Association
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Attention: Mr. George W. Anderson
Sustaining Organization Representative

Automatic Signal Division, Eastern Industries, Inc.
Regent Street — East Norwalk, Connecticut
Attention: Mr. Paul L. Green
Sustaining Organization Representative

California Metal Enameling Company
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Attention: Mr. Standish K. Penton
Sustaining Organization Representative

Crouse-Hinds Company
Wolf & Seventh North Street — Syracuse, New York
Attention: Mr. Kenneth W. Mackall
Sustaining Organization Representative

Fiberaised Bar and Line Company
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Attention: Mr. John E. Perry
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General Electric Company
Hendersonville — North Carolina
Attention: Mr. D. T. Carter
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Attention: Mr. W. E. Miles
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Attention: Mr. William E. Lenz
Sustaining Organization Representative

(Continued on next page)

LETTER TO THE EDITOR

One Way Streets and Juvenile Delinquency

Sir:

On the evening of November 22, 1955, the Traffic Engineering Division was involved in a hearing concerning the further expansion of one-way streets in Grand Rapids.

About five years ago, a comprehensive plan of one-way streets was adopted; however, because of its relatively newness to the area, only a single pair of streets was installed in a one-way direction each year until we had at last reached the last pair in this original comprehensive one-way system. The opponents against making this particular street one way five years ago, of course, were still opposing it as of Tuesday night and primarily I feel they were against it either because they were afraid of the supposed inconvenience of the change, or they did not want to get buses on the street which would result from this plan.

I thought though that the most amusing incident which resulted from the hearing was a statement by one of the opponents of the plan that we actually would be promoting juvenile delinquency within the city. This, of course, was rather novel and I knew that Traffic Engineers were accused of a lot of things, but I never knew that they could qualify for being promoters of juvenile delinquency. This gentleman made a recording at one of our TV stations and I was able to acquire this statement and I am enclosing it herewith for your information. I think it might be interesting to some of our fellow members when they proceed with their one-way plans.

> "If Fountain Street N.E. becomes a one-way street in an easterly direction, automobiles discharging student passengers will be forced to do so on the south side of the street on the curb opposite the school building. I am assuming that the right lane of traffic is slow or a stopping lane. Since this line of cars is often a block long, in inclement weather, it would be impossible for all passengers to dismount near a crosswalk. The students will then quite naturally jaywalk across the street, thus breaking an ordinance. Should the car unloading passengers come to a stop on the

ITE SUSTAINING ORGANIZATIONS *(Continued)*

Minnesota Mining & Manufacturing Company
900 Fauquier Avenue — St. Paul 6, Minnesota
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Sustaining Organization Representative

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Attention: Mr. H. N. Carver
Sustaining Organization Representative

Portable Traffic Signals, Inc.
146 West 21st Street — Los Angeles 7, California
Attention: Mr. W. W. Taylor
Sustaining Organization Representative

Prismo Safety Corporation
Huntingdon — Pennsylvania
Attention: Mr. John C. Horn
Sustaining Organization Representative

Revere Corporation of America
Wallingford — Connecticut
Attention: Mr. Walter K. Davies
Sustaining Organization Representative

Reynolds Metals Company
2500 South 3rd Street — Louisville 1, Kentucky
Attention: Mr. Douglas McKellar
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Robbins Tire and Rubber Company, Inc.
Tuscumbia — Alabama
Attention: Mr. Ellis Webb
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The Streeter-Amet Company
4101 North Ravenswood Avenue — Chicago 13, Illinois
Attention: Mr. George F. Graham
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Tuthill Spring Company
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Attention: Mr. H. T. Moore
Sustaining Organization Representative

Union Metal Manufacturing Company
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Attention: Mr. W. A. Porterfield
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U. S. Porcelain Enamel Company
4635 East 52nd Drive — Los Angeles 22, California
Attention: Mr. J. L. Hodgkinson
Sustaining Organization Representative

Wald Industries, Inc.
301 Penn Street — Huntingdon, Pennsylvania
Attention: Mr. John R. Wald, Jr.
Sustaining Organization Representative

north side of Fountain Street, front seat passengers and those in two-door cars, of which there are many, will find it quite often necessary to dismount on the street side into the center of traffic, thus breaking another ordinance.

The city has made these laws, but in making the proposed change in traffic flow, the young folks have little choice in the matter of breaking them. When situations of this sort are created to encourage the breakage of laws and ordinances, and I honestly declare that this is one of the first steps in promoting juvenile delinquency."

J. D. FRANKLIN
City Traffic Engineer
Grand Rapids, Michigan
November 29, 1955

MISCELLANEA

Pot-holius Montrealis

Here is the only photograph in existence of **Pot-holius Canadianis** (known locally as **Pot-holius**) a sneaky, nocturnal rodent which digs holes of varying sizes and shapes in asphalt roadways in springtime.

Pot-holius, who summers in the frozen waters of Siberia arrives in this country usually during February, via Alaska, the Yukon and Northwest Territories. On his trip here he must burrow through snow all the way, using his propeller-type hands to pull him through. The snow is used as a means to propel himself, just as a swimmer uses water to propel himself with his hands. As the migratory pack moves across our north, various members of the group pull out of the main group and move south, looking for likely cities.

It must be understood that **Pot-holius** is in a thoroughly depleted and exhausted state when he arrives, as asphalt provides most of his energy. At first nibbling weakly

at small loose chips by the side of the road, he quickly gains strength. His belly rounds out to the conventional doughnut shape which glows with a bright, almost flourescent light at night, when he is well fed.

The physiology involved is not known, but Hochanptui of McGill feels that the tar in the asphalt is somehow ignited, and byproducts of combustion are assimilated in much the same fashion as they are used in a combustion engine, to keep the animal alive for the ten months of the year when he is not wrecking city streets.

Pot-holius operates solely at night and sleeps suspended from the underside of manhole covers during the day! As a matter of fact **Graphic Ads** first uncovered this habitat and started the whole investigation when one of our photographers complained that he found it increasingly difficult to lift manhole covers. This serious matter was investigated and **Pot-holius** was uncovered.

Pot-holius does not, as P. V. Hoopenschlagel suggested in a paper to be published in the Royal Zoological Journal in June, dig up the asphalt except for the first few crumbs when he arrives. All asphalt is ingested in molten form; i.e. **Pot-holius** seats himself briefly on the roadway, thus turning a small patch molten from his internal heat. He rises, whirls quickly and places his long, suction-cup-shaped mouth over the spot, drawing in as much tar as possible. Loose stones taken in in this way are filtered out through the "stone shute" protruding from the back of his neck.

At the end of his 4-9 week season, he takes to the air. Hoopenschlagel correctly explains this phenomenon as follows: "The doughnut-shaped belly of **Pot-holius** is, to a great extent, filled with glowing, gaseous material which gives a buoyancy to the animal which it does not have upon its arrival. We have noted too, that the 2 months ingestion of asphalt causes an almost 100% increase in the size of the propeller-type hands, which now makes propulsion through the air quite feasible."

Pot-holius is a striking animal in appearance. The white underside of the doughnut-shaped body glowing at night as the animal begins its homeward flight is a startling sight, and has, the Dominion Observatory now feels, been responsible for many flying saucer rumours. Viewed from above **Pot-holius** is striped along the neck and upper side of his body, much in the manner of a bumble bee. In fact many motorists stick to the assertion that, while **Pot-holius** may be a genus of his own, there are unmistakable reasons for believing that he is to a great extent, a son of a bee.

SECTION NEWS

MISSOURI VALLEY SECTION

Taken from the Missouri Valley Section Newsletter, George C. Lichty, Editor.

Missouri River Highway Bridge Dedicated

The new bridge across the Missouri River at Jefferson City was dedicated and opened to traffic August 20. The bridge, serving both US Routes 54 and 63, and its connections cost a total of $6,750,768, with $4,812,827 of that going for the bridge proper.

The structure, 3,093 feet 9-5/16th inches long is 75.33 feet above high water mark, sufficient to accommodate all river traffic. The US Route 54 connection through the Missouri River bottoms has been raised above high water, to assure year round use of the bridge regardless of river conditions.

The roadway is 28 feet wide between curbs. Sidewalks 4 feet 10 inches wide are on each side of the roadway. Floors of the main truss spans are of haydite concrete, the remainder of regular concrete, all 6½ inches thick. Trusses are 32 feet above the roadway at each end and 94 feet at center.

The Commission first approved preparation of plans for the new structure May 16, 1952. Initial contracts were completed May 16, 1953. First construction was done May 18, 1953. Substructure was completed April 1, 1954. Installation of steel superstructure began May 20, 1954, and the main arch superstructure was closed March 8, 1955.

The bridge replaces one opened to traffic in May, 1896, built at a cost of about $225,000 raised by local citizens. That bridge was operated as a toll structure until 1932, when it was taken over by the Commission and made a free crossing.

Parking Garage for Omaha

"The City is going ahead on plans for the construction of a parking garage under the Court House lawn. This facility will accommodate about 500 cars in a half block area. It will be financed by the issue and sale of revenue bonds and, of course, it remains to be seen whether the project will appear to be feasible to the bankers who will buy the bonds.

"The state, county, city and federal Bureau of Public Roads are participating in a comprehensive metropolitan area highway survey. The contract for this work was awarded to **Howard, Needles, Tammen & Bergendoff.** The traffic survey has been sublet to **Wilbur Smith** and Associates. **Jack Darnell,** of Wilbur Smith and Associates, is in town and has already started the external O & D study."

Wichita's Expanded Marking and Building Program

"We are now in an expanded program of traffic markings, particularly in the central business area of the City, and the City Commission has indicated that the Traffic Engineering Division will be helped considerably with money and equipment to further expand this program, in both the central business area and the rest of the city.

"I'm trying to keep a tremendous street paving program, a tremendous sewer program and a lot of street maintenance work, going to give the people as much service as we can. We are likewise in the midst of the greatest building program of all time and consequently, our Building Inspection Division is also kept extremely busy. The value of our building permits for the first six months of this year is almost 50% greater than last year, and greater than any year in the history of the city."

New St. Louis City and St. Louis County Traffic Planning Committee

It looks like brighter days are ahead for a solution to the traffic problems in St. Louis City and St. Louis County. A Committee headed by most capable personnel has been formed to work out jointly the great traffic problems now confronting both the city and the county. One of the big stumbling blocks in street and highway planning in this area has been the lack of coordination between the city and county. The numerous municipalities in the county have not joined together as they should. **Joseph J. Feuchter** heads a committee on Parking. We know **Joe** has the overall picture in this area and will be a great asset to the general committee.

METROPOLITAN SECTION

Taken from Metropolitan Section Newsletter, Richard I. Strickland, Chairman.

December Meeting Notes

The December meeting was held at the Military Park Hotel in Newark on January 12th at 8 P.M. The meeting was opened by the showing of a new 40-minute General Motors Corp. film entitled "Let's Go to Town." This colored film presented the traffic problem in medium and large size cities and suggested the only reasonable solution: buses. Following the movie, **Ed Cone** of Public Service Coordinated Transport presented his ideas in regard to the necessity of public transit. The basic problem in our modern cities is to move people, not vehicles. Therefore, if more people can be put into a single vehicle this should be done to make maximum use of available streets. **Mr. Cone** outlined the many operating problems with which bus lines must deal. The flexibility of bus operation as opposed to fixed rail transit was stressed. But bus service must be fast and convenient to attract customers. Means which can be used to improve bus

(Continued on page 322)

Positions Available

CITY OF INDIANAPOLIS INDIANA

SENIOR ASSISTANT TRAFFIC ENGINEER

Must be graduate engineer with one to two years' experience in traffic. Capable of assuming considerable responsibility in Bureau of Traffic Engineering.

SALARY: $5000 to $6500 per year depending on qualifications.

Write:
William H. Bilby
Traffic Engineer
Room 208, City Hall
Indianapolis, Indiana

CITY OF FORT LAUDERDALE FLORIDA

TRAFFIC ENGINEER

To fill newly established position. Minimum requirements: U. S. citizen, age 21-45, degree in engineering with one year of graduate study in traffic engineering or its equivalent.

SALARY: $5440-$6305 per year.

Apply:
Robert A. Earle
Personnel Director
City of Fort Lauderdale
Fort Lauderdale, Florida

CITY OF LOS ANGELES, CALIFORNIA

TRAFFIC ENGINEERING ASSISTANTS

REQUIREMENTS: Graduate engineer or possession of California Engineer-in-Training Certificate. College Seniors may file for interview examination.

SALARY: $5000 to $6200 annually.

Write:
Civil Service Commissioners
5 City Hall
Los Angeles 12, California

CITY OF EVANSVILLE INDIANA

TRAFFIC ENGINEER

Graduate Engineer with one year traffic engineering experience.

Apply:
Louis H. Boink, Jr.
President, Board of Safety
27 S. E. Third St.
Evansville, Indiana

CITY OF NEW YORK, N. Y.

TRAFFIC ENGINEER
DEPARTMENT OF TRAFFIC

The Department of Traffic is in urgent need of two Senior Traffic Engineers each to head separate divisions of the Department of Traffic. Applicants are required to have an engineering degree from an accredited college or university and at least five years in responsible charge of all phases of traffic engineering. The applicant should have had at least one year study in traffic engineering at the graduate level. The applicant must be able to completely supervise anyone of the principal divisions of a modern traffic engineering department in a large city.

Beginning salary: $9,000 a year.

Write:
Commissioner T. T. Wiley
Department of Traffic
100 Gold Street
New York 38, N. Y.

THE PORT OF NEW YORK AUTHORITY

TRAFFIC ENGINEERS

For established Traffic Engineering Division to do General Traffic Engineering and studies involving diverse vehicular situations at bridges, tunnels, airports, and truck and marine terminals.

JUNIOR TRAFFIC ENGINEER

Graduate Civil Engineer with minimum one year experience in Engineering.

SALARY: $5000 to $6000 per year depending on qualifications.

TRAFFIC ENGINEER

Graduate Civil Engineer with special or graduate course work in Traffic Engineering with three years' experience in professional Traffic Engineering work.

SALARY: $6000 to $7000 per year depending on qualifications.

Write:
John G. Allyn
Technical Placement Representative
The Port of New York Authority
111 8th Avenue
New York 11, New York

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NIGHT
hide your stripes!

use Cataphote
GLASS BEADS
FOR NIGHTTIME SAFETY

Reflective Striping Results In Greater Safety 'Round-The-Clock

Cataphote Beads enable you to reflectorize your traffic marking economically and effectively. Striping with Cataphote Beads wears 50% longer . . . means lower cost marking—dries faster, too! Available in Standard or Wet-proof . . . Drop-on or Premix . . . to fit your procedures.

Write for free 1 lb. sample for your lab analysis, or place a trial order and apply the beads to a test marking —you'll have a stripe that works at night!

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Reflective Traffic Products:
- CATAFLEX SIGN KITS
- CATAPHOTE TRAFFIC SIGNS
- CATALINE REFLECTIVE STRIPING
- CATAPHOTE REFLECTIVE BEADS

SECTION NEWS

(Continued from page 320)

service are the following: establishment of peripheral parking areas, provision of express lanes for the exclusive use of buses, and unrestricted use of Freeways by buses.

Traffic Death Toll 38,300 in 1955

Traffic accidents killed 38,300 Americans in 1955, one of the heaviest tolls in history.

Last year's motor vehicle death total tied with the 1953 toll for the third highest on record. It was 1,669 under the all-time high of 39,969 reached in 1941 and approached the 39,643 registered in 1937, the runner-up year.

The 1955 death rate per 100 million vehicle miles was estimated at 6.4, the same as in 1954.

Safety Treatment on New Jersey Highway

After exhaustive studies and check tests, the New Jersey State Highway Department has developed a plan to increase driving safety on U.S. Route 1. The plan includes resurfacing of the Portland Cement concrete roadway with a thin layer of skid resistant material and separation of opposing lines of traffic by means of a concrete barrier curb. The safety treatment will extend from the westerly end of the highway at Newark to the Broadway Ramp in Jersey City.

Skidding accidents on the highway resulted from oil drippings on the concrete pavement, which has been worn to a terrazzo-like surface as a result of heavy daily traffic volumes over the past 25 years.

Automotive Exhaust Gases In Los Angeles

Studies now closely show that the removal of all other sources of hydrocarbons from refineries and from the distribution of gasoline will not lower the concentration of hydrocarbons in the downtown area and the north-central section of the county sufficiently to relieve the eye irritation, crop damage effects, and high ozone content of the air in those areas. The marked influence of traffic in the early morning hours increase the concentration of hydrocarbons to levels which cannot be tolerated in the Los Angeles atmosphere.

On the basis of the total studies, it has been concluded that the hydrocarbons must be removed from the exhaust gases of the automobile. Furthermore, the efficiency of removal must be extremely high. It is anticipated that the Los Angeles basin will ultimately serve 10 million persons. Because of the topography and the limited atmosphere, it can be anticipated that other areas will be influenced by a dense traffic pattern in the future. Freeway improvement provides easy access to outlying areas and traffic density can be expected to increase. The Air Pollution Control District recommends that engineering studies seeking to remove hydrocarbon vapors from exhaust gases should strive for a 90-per cent overall removal under conditions of operation experienced in heavy traffic.

WASHINGTON SECTION

Clipped from Washington Section Newsletter, C. C. Robinson, Editor.

One hundred thirty-five I.T.E. members and guests made up the audience for Air Force Colonel **John T. Stapp** at the annual "Research Board" meeting of the Washington Section. Colonel Stapp, in an illustrated talk, detailed the deceleration testing program at Alamogordo Medical Field Laboratory, and some of the implications of this research on the automotive accident picture.

Baltimore traffic engineers had their first test of the value of mobile radio equipment during the transit strike which started January 30th. Radio equipped cars were stationed at key locations throughout the city to report on conditions, and take immediate action to relieve congestion where possible. In addition to changing signal timing to accomodate the new conditions and working with the police bureau to relieve spot problems, Department of Traffic Engineering crews posted temporary signs allowing parking in approximately 5600 stalls where parking was normally prohibited.

The Regional Advanced Highway Training Program held at the University of Maryland on February 6th thru February 17th called upon a number of local I.T.E. members as instructors. A total of nine were on the program.

John Mitton, I.T.E. representative on the President's Committee for Traffic Safety announces that four regional conferences will be held this spring. National and local I.T.E. officers have been contacted and asked to participate in the programs.

Dedication of the new headquarters building of the National Society of Professional Engineers at 2029 K Street, N.W., took place February 17th. Past and present officers of I.T.E. were in attendance. I.T.E. headquarters will move to this building from the present location in New Haven on the first of June.

The resolution of the Institute of Traffic Engineers calling for an expanded highway program, (text in December issue of Traffic Engineering), has been transmitted to all members of Congress. **Charlie Prisk** reports that a number of voluntary replies have been received commending the Institute's position.

The National Parking Association has announced appointment of **William G. Barr** as Administrative Director, with offices in Washington.

WESTERN SECTION

Officers Change Jobs

The work of traffic engineers, directed towards more efficient movement of people and goods, has many facets. In the overall picture, restrictive traffic engineering makes the most of available facilities through methods of control. Constructive traffic engineering is the means of increasing transportation service through the use of new or improved facilities. The traffic engineer in every jurisdictional level is involved in both of these fields. Our President **A. L. (Hutch) Hutchison** has moved from the restrictive area to the constructive area, although his former duties as District VII Traffic Engineer for the California Division of Highways lay in both fields. His new title **"Bottom Drawer Hutch"** describes activities closely associated with the official title of Assistant District Engineer, Advance Planning. The only difference in accomplishments between his old and new job is in the matter of time. In the past, he had to take care of the daily complaints now, or even yesterday. In the future adverse traffic conditions will be taken care of in a period of five to ten years. Good luck **Hutch!**

Mel West, your Secretary, changed jobs at about the same time. He too, moved from the restrictive field as District XI Traffic Engineer in San Diego to the constructive field as Engineering Studies Engineer in the Highway Planning Survey of the California Division of Highways in Sacramento.

A. L. Himelhoch is the new District Traffic Engineer, replacing **Hutch,** and **John W. McDonald** replaced **Mel West** in San Diego on February 1.

Sacramento Area

Eleven members and one guest met at lunch in the cafeteria of the Public Works Building on Friday noon, January 20. **E. T. Telford,** District Engineer of District VII, Division of Highways, attended as a guest. The Sacramento area welcomed WITE Secretary **Mel West** as a new resident. **Mel** was transferred from the San Diego district to Headquarters where he will head a newly established section of the Planning Survey.

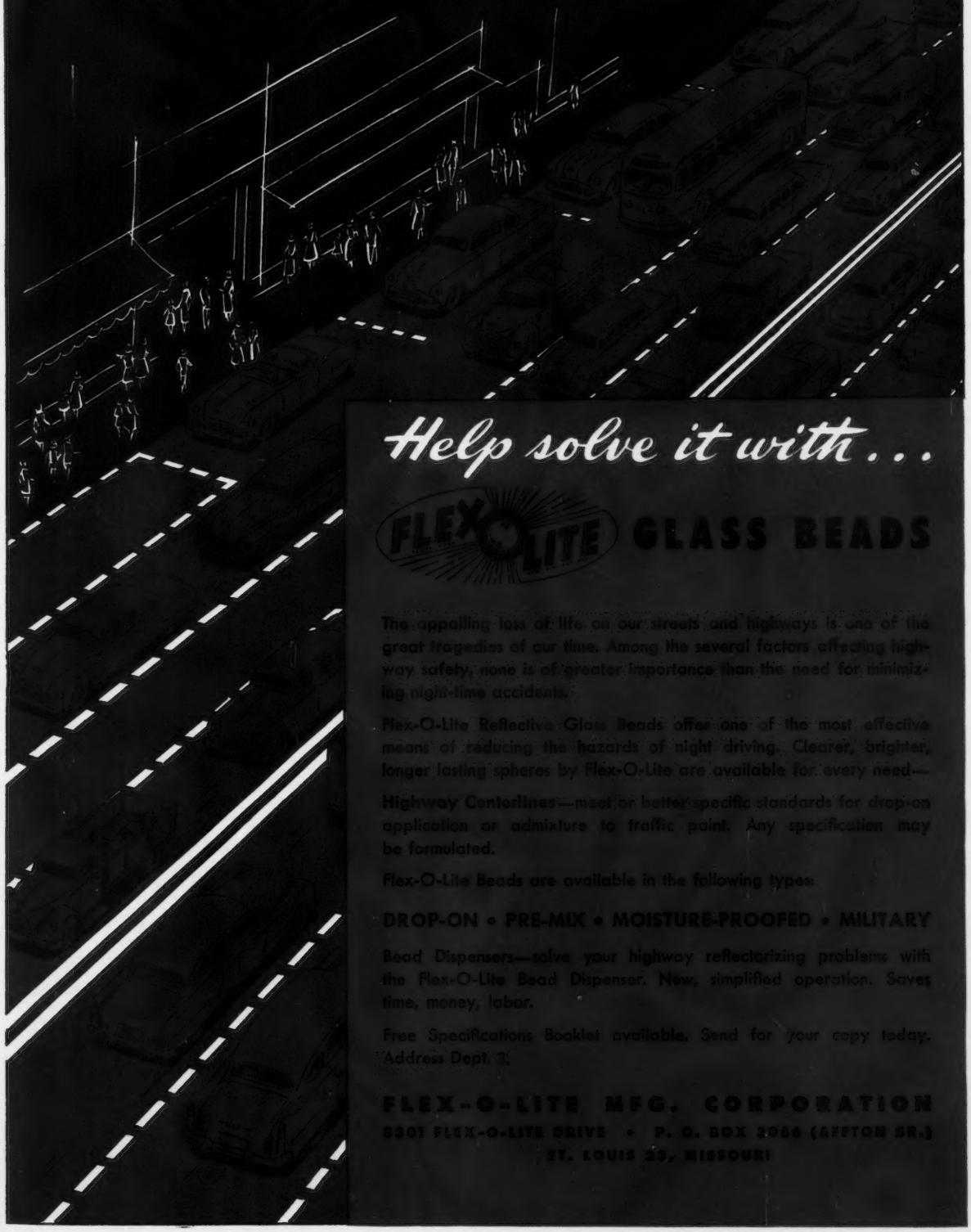
The long-awaited **Faustman** heir reported in December 5, considerably later than the original ETA. Sara and young William Otto are reported to be doing well, but rumor has it that **Jack** intended to get a little rest in between attending meetings of the Uniform Sign Committee and the Highway Research Board.

Sacramento was the site of several other meetings during the third week in January. The legislative advisory committee on a uniform traffic control manual held its second meeting under the chairmanship of **Gran Parmelee.** Other WITE members attending included **George Webb, Ross Shoaf, Sam Taylor, Guy McDonald** and **Dud Stevens.**

The night before the legislative advisory committee meeting a number of those who had arrived early for the meeting inspected a number of new signs on the Sacramento-Roseville freeway (not yet open to traffic). The inspection tour was arranged and conducted by personnel of the State Traffic

TRAFFIC SAFETY

America's No. 1 Problem...



Help solve it with...

FLEX-O-LITE GLASS BEADS

The appalling loss of life on our streets and highways is one of the great tragedies of our time. Among the several factors affecting highway safety, none is of greater importance than the need for minimizing night-time accidents.

Flex-O-Lite Reflective Glass Beads offer one of the most effective means of reducing the hazards of night driving. Clearer, brighter, longer lasting spheres by Flex-O-Lite are available for every need—

Highway Centerlines—meet or better specific standards for drop-on application or admixture to traffic paint. Any specification may be formulated.

Flex-O-Lite Beads are available in the following types:

DROP-ON • PRE-MIX • MOISTURE-PROOFED • MILITARY

Bead Dispensers—solve your highway reflectorizing problems with the Flex-O-Lite Bead Dispenser. New, simplified operation. Saves time, money, labor.

Free Specifications Booklet available. Send for your copy today. Address Dept. 3:

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NOW IN 3 SIZES!

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SPECIAL ADAPTERS INCREASE USES!

Signs-Flashers-Flag Adapters

PAINTED OR REFLECTORIZED

12" size all yellow on black base only. 18" and 28" available in standard tri-color or REFLECTORIZED all-yellow on black base.

NEW! Flasher lights!

Uses standard 6-volt battery. Fits into top of all sizes. Unbreakable plastic lens.

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Low cost, long life, light weight make SAFE-T-CONES ideal for every traffic control need. Tough and strong, they're made to last, even with most abusive use.

Write for complete descriptive folder

SAFE-T-CONES are made only by RADIATOR SPECIALTY CO., Charlotte, N. C.

Engineer's office with **Bruno Dentino** supervising and assisted by **Ray Lenau.**

Lee Kies has started the year off right by adding another tax deduction. It's a girl, Susan Lynn. Lee has assured us that he'll keep trying until he gets a boy.

Los Angeles Area

On Thursday evening, January 26th in connection with the Eighth Annual California Street and Highway Conference, a dinner meeting was held at the Hollywood-Roosevelt Hotel. There were 137 members and guests on hand to hear a very fine presentation by **Mr. Al F. Malo,** director of Streets and Traffic of the City of Detroit, upon the subject of "Public Relations in Traffic Engineering." National Vice-President **Joe Havenner** was on hand and Western Section President **Al Hutchison** was master of ceremonies. Among the distinguished guests were **Mr. Carl Fritts,** Vice-President of the Automotive Safety Foundation, **Mr. Harmer Davis,** director of ITTE of the University of California and **Mr. Bob Glenn,** Extension representative of ITTE of the University of California.

Among our guests were many officials of the U. S. Bureau of Public Roads, the California Division of Highways and City-County Engineers and others.

On Wednesday evening, January 25, at the Hollywood-Roosevelt Hotel there was a Steering Committee meeting of the Engineering Division of the Governor's Traffic Safety Conference. The gentlemen were preparing a report upon the year's activity and selecting a program for the 1956 meeting to be held in October. Those present were **Mr. Dudley F. Stevens,** Chairman, Sacramento, **Mr. William S. Foulis** of the Automotive Safety Foundation, **Mr. G. A. Trosper** of the P.G.E., **Mr. Geo. M. Webb** and **Mr. B. A. Switzer** of the Division of Highways, **Mr. C. M. Gilliss,** Deputy Director of the Department of Public works, **Mr. A. C. Keith,** Road Commissioner of Riverside County, **Mr. Robert Jackson** of the National Automobile Club and **Gran Parmelee** who was selected chairman of the Engineering Division for the 1956 meeting.

San Diego Area

The San Diego Area of the I.T.E. celebrated the holidays with a dinner and dance at the El Nadadero Country Club. There were 38 people, including the following: **Anne** and **John Tsiknas, Jeanne** and **Marty Bouman, Janice** and **Paul Fowler, Gen** and **Hal Durham, Helen** and **Jack Henberger, Judy Brannan** and **Stephen George, Kathleen** and **Ed Hall, Leason** and **Chuck Strong, Suzanne** and **Mel West, Celia** and **Lucky Luckenbach.**

Janet and **Don Robbins** report the arrival of a young son.

The joint efforts of the City Traffic Engineering Division and the Transportation Research Staff are producing a major Parking Inventory of the Downtown area of the City of San Diego. The survey is being done by State College students during the Christmas holidays and includes an inventory of both street and off-street parking. It is planned that the Parking Inventory, when completed, will be currently maintained by the staff of **Jim Reading.**

Jim Reading reports that the retiming of various signal systems in the Central Business District of San Diego to a 70 second cycle has greatly expedited the flow of traffic through this congested area. **Jim** reports that **Paul Fowler** did considerable work on this project and that the Traffic Division of the Police Department is very enthused about the results.

The Division of Highways recently opened two pedestrian over-crossings on U.S. 101 near the Naval Center with resultant improvements at these busy intersections.

The San Diego Section looks upon the departure of **Mel West** with deep regret and with much appreciation of the innumerable contributions he has made to the area. The Section extends to Mel its heartfelt best wishes for all the success he will achieve in his new assignment in Sacramento.

Paul Fowler has undertaken the responsibilities of County Traffic Engineer with the San Diego County Road Department and **Don Robbins** has joined the San Diego City Traffic Engineering Division.

1956 Yearbook Now Available

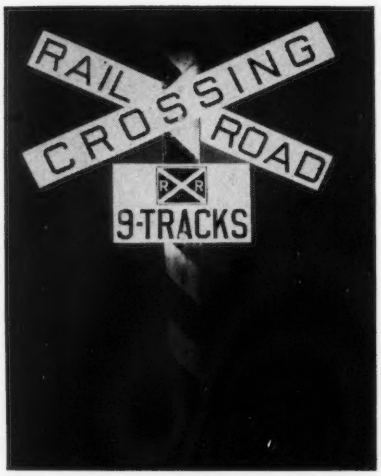
The ITE Yearbook has been distributed to the membership, Sustaining Organizations and advertisers. Additional copies are available at no charge upon request at Headquarters.

Please notify us if we can send extra copies to you or your friends.

Strictly Business

Kaiser Aluminum Railroad Crossbuck

A new extruded aluminum railroad crossbuck of improved design that saves both lives and dollars has been developed by Kaiser Aluminum & Chemical Corporation.



Coated with "Scotchlite" reflective sheeting that leaps out of the darkness to warn motorists against possible disaster at grade crossings, thousands of the new Kaiser Aluminum crossbucks are being purchased and installed by many of the nation's leading railroads, including the Milwaukee Road, the Baltimore and Ohio Railroad, the Chicago & Northwestern Railway, the Rock Island Lines, the Santa Fe Railway and others.

A leader in modernizing its sign program with reflectorized Kaiser Aluminum crossbucks is the Milwaukee Road, which has purchased more than a carload of the extruded sections, applied "Scotchlite" sheeting in its shops and erected the signs at grade crossings.

Besides warning motorists more effectively, the new Kaiser Aluminum crossbucks save money for the railroads by cutting maintenance costs and by offering a service life far longer than that of older style signs made of steel or wood.

Requiring no paint for protection, Kaiser Aluminum crossbucks will not rust, rot or warp. Alumiuum has the additional advantage of being an ideal base for reflectorized sheeting, since the sections require a minimum of preparation and offer the most durable, noncorrosive backing. It also offers an excellent base for printed lettering.

The crossbuck consists of two extruded aluminum blades which are attached, criss-cross, to a post by nuts and bolts. Sections with bolt holes already drilled for mounting are available. Kaiser Aluminum supplies the extruded sections cut to lengths desired by the railroads, generally in standard four-foot and six-foot lengths. The blades are nine inches wide and .018 inches thick. Some railroads are applying reflective material in their own sign shops.

Erection of a Kaiser Aluminum crossbuck is simple and fast because of its light weight—less than 1.3 pounds per foot. One blade of a four-foot aluminum crossbuck thus weighs 5.13 pounds and can be handled easily.

The fact that aluminum can be economically extruded into complex forms, placing metal exactly where it is needed when a section is being made, gives Kaiser Aluminum crossbucks both cost and design advantages.

Protection for Highway Signs

The Egyptian Lacquer research laboratory announces the development of a completely new and vastly superior coating for aluminum. Clear Coating CH-64 will give excellent protection to aluminum surfaces from outside exposure. Weather quickly darkens and dulls uncoated aluminum. Our Clear Coating will preserve the original lustre and integrity of aluminum metal. CH-64 will greatly reduce maintenance costs.

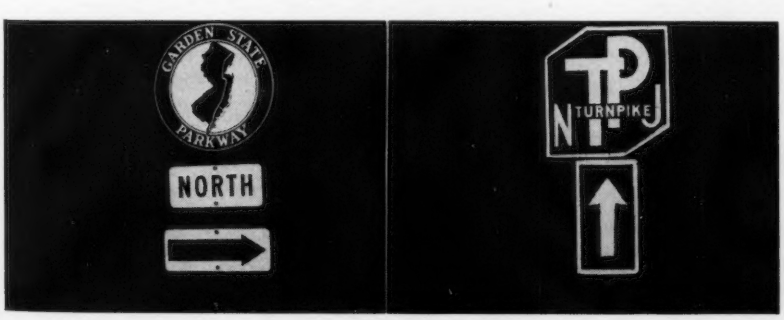
Clear Coating CH-64 dries rapidly and can be handled in less than 15 minutes. It is reduced with Special Thinner TH-65 in a ratio of 5 to 2. Thinner TH-55 may be used when coating small surfaces. This revolutionary development has unlimited applications everywhere that aluminum is used.

It is very important that aluminum surfaces be clean before CH-64 is applied. On weathered aluminum surfaces we recommend a 3% phosphoric acid wash followed by a thorough hot water rinse. On new aluminum it is necessary only to be sure that the surface is free of dirt and is thoroughly washed with a cleaning solvent and dried.

For additional information write to:
The Egyptian Lacquer
Manufacturing Co.
P. O. Box 444
Newark 1, New Jersey

Individualistic Highway Signs

It is interesting to note the individualization of designs used in identification for super-arteries. In outline, style of lettering and color, these signs have high recognition and retentive characteristics. The motorist, having once seen signs like those identifying The New Jersey Turnpike, or The Garden State Parkway, is not likely to confuse them with each other, or with any other identifying signs in this geographical area. Both the Jersey Turnpike and Garden State signs illustrated are products of Traffic & Street Sign Company, Newark, New Jersey.



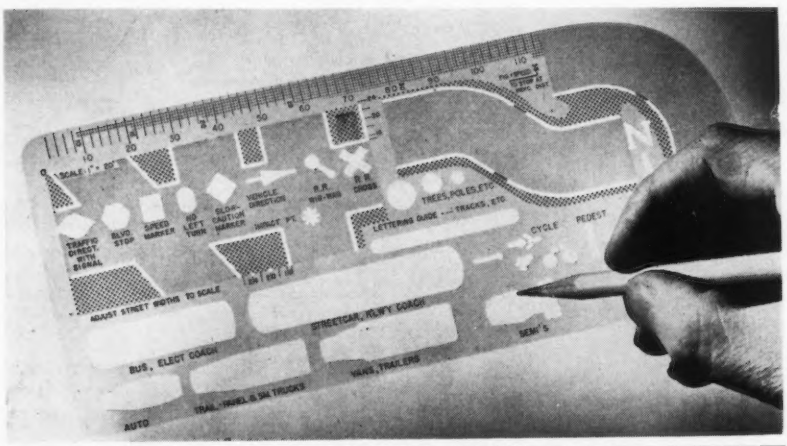
New Diagrammer for Traffic, Transportation Flow and Accident Reports

Persons and businesses engaged in any form of surface transportation can now use a simplified, accurate diagramming stencil to chart or draw conditions, plans or reports involving traffic flow, vehicular and pedestrian accidents, depot schedules, garaging, parking and detouring.

Made in 1″ 20′ scale, this rigid transparent vinyl diagrammer contains cut out symbols that can be used with pen, pencil or stylus and duplicating equipment. No other drafting instruments or drawing experience is necessary. The diagrammer contains clearly marked symbols of cars, buses, trucks, trains, vans, trailers, pedestrians, bicycles, street intersections of all angles, highway and railroad warnings and signals, tracking, trees, poles, etc.

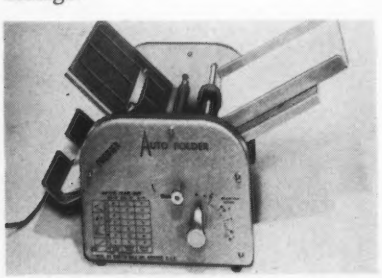
An important innovation is an engraved scale showing at a glance the number of feet normally required for emergency stopping of automobiles and trucks traveling at various speeds.

The 3⅜″ x 8″ diagrammers, which are pocket size and practically indestructible may be ordered directly from A. Lawrence Karp, 16 Putnam Park, Greenwich, Connecticut, at $2.00 each, postpaid.



Automatic Folding Machine Available

New economy in quantity mailings is now possible by offices of any size with the new high-speed, low cost Premier Auto-Folder, an automatic folding machine developed by Martin-Yale Inc. of Chicago.



Capable of producing the 7 basic and most used business folds at a rate of more than 7000 pieces per hour, the Premier Auto-Folder will handle stock up to 9½ inches wide by 14 inches long. Little larger than a standard typewriter and completely portable for use anywhere in the office, the new Premier Auto-Folder is designed to eliminate costly and tedious hand-folding operations so often occurring in offices.

Notices, reports, memos, statements, bulletins, bills, advertising material, regular correspondence—any of the many pieces of mail flowing through every office can be quickly, efficiently and economically handled with the new Premier Auto-Folder. The most unskilled operator can set single, double, standard, accordion, French and many other folds into the machine simply by referring to the folding chart permanently inscribed on the side of the machine.

The new Premier Auto-Folder is powered by an electric motor which operates on 110-120 Volts AC current, and is attractively finished in silver-grey baked hammerloid. All exposed metal parts are satin-chrome plated.

The Premier Auto-Folder automatic folder is priced at only $129.95. A hand operated model is also available at $89.95. Complete information on the new, low-cost Premier Auto-Folder is available from the Martin-Yale Inc., 2100 West Fulton Street, Chicago, Illinois.

Automatic Signal Develops New Instrument

Science is bringing some of its newest weapons to bear on the problem of moving traffic safely and expeditiously over the Merritt Parkway, it was recently announced by Lieut. Louis D. Marchese, in command of the Westport Barracks of the Connecticut State Police.

Equipment is being installed which will bring into the Barracks complete and accurate information on the number of cars using a three-mile long section of the Parkway at all times, and on the speeds at which they are travelling. The officers on duty at the Barracks will be able to keep track of changes in volume and speed of vehicle movements by observing the readings of dials which show this information with high accuracy. The monitoring system is being installed on an experimental basis and is the first of its kind anywhere.

This development is the product of Automatic Signal Division of Eastern Industries, Inc., of Norwalk, Conn., working in cooperation with the Connecticut State Police, State Highway Department, and the Merritt Parkway Commission. Principles of radar and modern electronic computers are employed, worked out over a period of years by the engineers of Automatic Signal Division who have been responsible for the well-known Electro-Matic Radar Speed Meter and for electronic traffic signal control equipment which is widely used throughout the country for controlling vehicle and pedestrian movements at the intersections of streets and highways.

State Police speak of "remote surveillance" when referring to the new technique. The average motorist will probably not be aware of the inconspicuously mounted radar antenna which will pick up the rate of speed and the volume of travel on the area under observation. The information is brought into the Barracks over ordinary telephone circuits. Mounted on the front of a compact cabinet are the necessary controls and the meters which constantly show the volume and speeds being monitored. Readings of the meters are traced simultaneously on rolls of recording paper, furnishing a permanent graphic record of traffic movement.

Police officials see many advantages in being able to keep a constant headquarters check on traffic conditions over a

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gives the motorist time to be safe!

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AVERAGE STOPPING DISTANCE 132 FEET AT 40 M.P.H.
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GROTELITE SS CLEARLY LEGIBLE THROUGHOUT THIS DISTANCE!
GROTELITE SS VISIBLE HUNDREDS OF FEET BEFORE THIS POINT!

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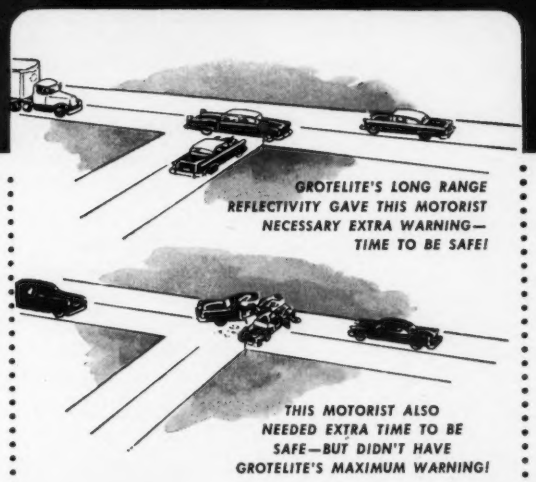
GROTELITE'S LONG RANGE REFLECTIVITY GAVE THIS MOTORIST NECESSARY EXTRA WARNING— TIME TO BE SAFE!
THIS MOTORIST ALSO NEEDED EXTRA TIME TO BE SAFE—BUT DIDN'T HAVE GROTELITE'S MAXIMUM WARNING!

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heavily travelled route such as the Merritt Parkway. A knowledge of changing traffic volumes, rates of speed, and developments of any unusual conditions reflected by the instrument readings make possible the most effective use of manpower in coping with the control problems involved in fighting accidents and congestion.

The new equipment is equally effective day or night and it is not affected in any way by weather conditions. The use of telephone circuits to bring the necessary electrical information to the monitoring center makes for maximum reliability at all times. There is no practical limitation on the distance between the pickup and the recording apparatus.

It is expected that results on the Merritt Parkway will demonstrate the effectiveness of this modern instrumentation in assisting police manpower and may well be the forerunner of its extended use.

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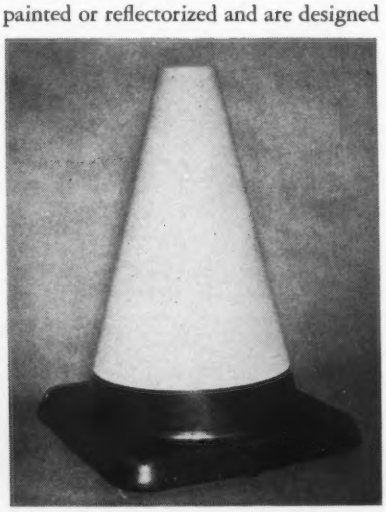
New 12-Inch Safe-T-Cone Announced

Radiator Specialty Company, Charlotte, N. C., manufacturers of SAFE-T-CONE Rubber Traffic Guides has recently added an additional size to their line. The new SAFE-T-CONE is 12-inches high with an 8½-inch square base. Three sizes are now offered, the 12-inch, 18-inch and 28-inch SAFE-T-CONES.

SAFE-T-CONES are available either painted or reflectorized and are designed to support rubber signs, flasher-lights, flags and lanterns. SAFE-T-CONES are universally used by state, county and municipal authorities for the control of traffic during line painting, emergency barricades, street repair, school zones, toll bridges and highways.



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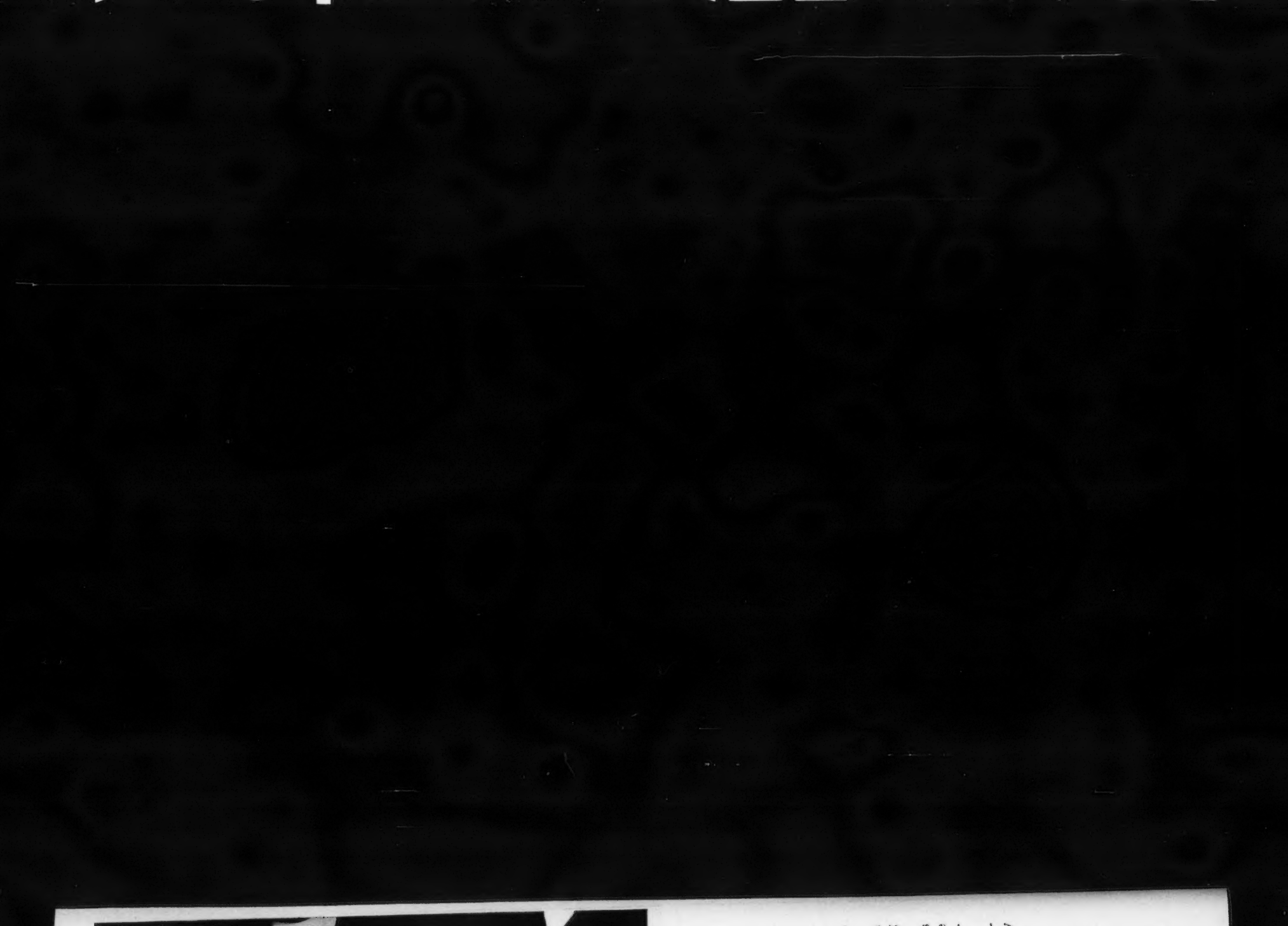
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